University of Bath

DOCTOR OF CLINICAL PSYCHOLOGY (DCLINPSY)

Doctorate in Clinical Psychology: Main Research Portfolio

1) Literature Review: The link between rejection sensitivity and borderline personality disorder: a systematic review and meta-analysis; 2) Service Improvement Project: Improving the treatment approach to mild TBI through the lens of lived experience; 3) Main Research Project: What others think: the impact of meta-stereotypes on self-disclosure of mental health diagnoses.

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Research Portfolio Submitted in Part Fulfilment of the requirements for the Degree of Doctorate in Clinical Psychology

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Doctorate in Clinical Psychology

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Main Research Project – Abstract

Self-disclosing mental health diagnoses may not only result in earlier help and support but also minimise the effects of mental health stigma, such as low self-esteem and isolation. However interventions designed to enable this have inconsistent outcomes. Forecasted interactions can predict disclosure-related distress and may offer an appropriate target for these interventions. Meta-stereotypes, or the way one believes others' stereotype them, may be particularly amenable to intervention. The current study aimed to identify whether mental health meta-stereotypes exist and how they impact disclosure comfort and self-esteem. Interviews and quantitative analysis were used to develop a meta-stereotype measurement tool. Seventy-two individuals with mental health diagnoses participated in an experiment asking them to imagine disclosing to someone with either positive or negative attitudes towards mental health. Results show imagining disclosing to someone with negative attitudes increases meta-stereotype elicitation and rejection-expectation, whilst decreasing comfort with disclosure. Furthermore, meta-stereotype elicitation was associated with disclosure comfort more so than rejection-expectation. Meta-stereotype elicitation did not impact self-esteem, however mediational analysis indicates an indirect relationship via rejection-expectation. However, in both conditions, disclosure was considered an uncomfortable experience, therefore alternative influences should be considered. Results are discussed in terms of the evidence base and future research is considered.

Service Improvement Project – Abstract

Purpose: Best treatment options for mild traumatic brain injury (mTBI) are limited. Guidelines have been created to standardise treatment (Ontario Neurotrauma Foundation [ONF]), however this has not been evaluated within a civilian, UK context. This paper audits the application of ONF guidelines and explores patient experience of the service to evaluate and improve treatment.

Methods: Following criterion-based audit to assess guideline usage, semi-structured interviews were thematically analysed to understand the needs of patients. Routine outcome measures were evaluated to identify clinical change.

Results and conclusion: Patients described the importance of trusted information, perceptions of injury and recovery, symptom management, and service evaluation. Service provision of accurate, trusted information improved symptom management and recovery. Audit suggested the clinic provided reliable information and assessed thoroughly, although intervention guidelines were not used consistently. Overall, a reduction in symptoms was observed amongst patients, although this change was not significant. As the clinic appeared to be meeting the needs of British patients, recommendations are made to maintain and enhance this, including a checklist to help guide and record clinics according to ONF guidelines.

Literature Review – Abstract

Aim: People with Borderline Personality Disorder (BPD) may experience heightened rejection sensitivity (RS), a disposition developing from repeated childhood rejecting experiences. However, it is not known whether the full model can account for the cognitive-affective experiences common in BPD. This systematic review extends upon previous reviews, firstly by assessing the link between BPD and RS in non-clinical and clinical samples. Secondly, the link between childhood rejecting experiences and adult RS is considered, with reference to the impact on BPD.

Method: Two research questions were devised and searches based on predetermined criteria were conducted using PsycNET, Pubmed, SCOPUS and Web of Science. Relevant data was extracted by one researcher and 20% were inter-rated, with high levels of agreement. In total, 39 papers were systematically reviewed. Meta-analysis and meta-regression was conducted with 31 papers.

Outcomes: Pooled effect sizes suggest RS is linked with BPD in both clinical and non-clinical samples (r = .305), with strong effect sizes when comparing clinical and control samples (r = .705). Qualitative synthesis indicates the link may be mediated by executive control, although further research is required. The number of studies assessing the link between childhood rejection and RS is limited and it is difficult to draw strong conclusions, however emotional neglect and abuse appears to be most frequently linked with adult RS. Limitations are considered and implications for clinical practice and future research discussed.

The Link Between Rejection Sensitivity and Borderline Personality Disorder: A Systematic Review and Meta-Analysis

Critical Review of the Literature

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Journal of Personality Disorders (IF: 3.158)

This journal was chosen as the subject matter of the review focuses on Borderline Personality Disorder and may be of interest to researchers and clinicians in the field (See Appendix A1 for submission guidelines)

Literature Review

Humans are primed to identify and respond appropriately to signs of rejection to maintain the central human motivation to belong (Baumeister & Leary, 1995). However, people with a diagnosis of Borderline Personality Disorder (BPD) differ in the degree to which they perceive and respond to rejection (American Psychological Association, 2013). The following review explores the existing evidence base to consider the influence of Rejection Sensitivity (RS) on BPD.

Attachment theory (Bowlby, 1969, 1973) suggests humans develop attachments to gain proximity to caregivers in times of need. Attachments support the development of Internal Working Models of the child and how others' respond to their needs as a template for future relationships. Early rejection experiences from primary caregivers, such as neglect or abuse, can give rise to an Internal Working Model characterised by expectations of, and hypervigilance to, rejection (Feldman & Downey, 1994). Rejection Sensitivity (RS) refers to this processing disposition and consequent cognitive-affective responses, such as intense cognitive responses to perceived rejection (e.g. self-blame, defensiveness, or aggression; Feldman & Downey, 1994). Paradoxically, whilst RS develops with an adaptive purpose of keeping individuals safe (Pietrzak, Downey, Ayduk, & Baldwin, 2005), these responses may unintentionally initiate rejection from others, maintaining a self-fulfilling feedback loop (Romero-Canyas, Downey, Berenson, Ayduk, & Kang, 2010; Rosenbach & Renneberg, 2011).

With the development of the Rejection Sensitivity Questionnaire (RSQ; Downey & Feldman, 1996), RS was found to be conceptually distinct from other constructs, such as social anxiety and avoidance, and have unique predictive utility in terms of how one perceives and responds to interpersonal situations. Indeed, individuals with high RS are more likely to experience heightened arousal following rejection cues (Downey, Mougios, Ayduk, London, & Shoda, 2004), process rejection cues more automatically (Berenson et al., 2009), and have greater sensitivity to identifying angry faces (Olsson, Carmona, Downey, Bolger, & Ochsner, 2013). Behaviourally, RS is linked with increased risk of domestic violence (Downey, Feldman, & Ayduk, 2000; Murphy & Russell, 2016), social avoidance (London, Downey, Bonica, & Paltin, 2007; Watson & Nesdale, 2012), and self-silencing of opinions (Harper, Dickson, & Welsh, 2006). Unsurprisingly, RS has also been linked with reduced self-esteem (Watson & Nesdale, 2012). However, many of these studies have been undertaken by one group of researchers and focus on white,

Western populations. It is not clear whether RS manifests differently in other cultures.

Given the effect on social relationships and consequent impact on the central need to belong, high RS may lead to reduced wellbeing and give rise to significant psychopathology (Gao, Assink, Cipriani, & Lin, 2017; Pietrzak et al., 2005; Rosenbach & Renneberg, 2011). The RS model may be especially pertinent to BPD (Renneberg et al., 2012) as RS encompasses several diagnostic factors subsumed within the DSM-V diagnostic criteria, including: “anxious preoccupation with real or imagined abandonment”, “intense feelings of nervousness, tenseness, or panic, often in reaction to interpersonal stresses” and “fears of rejection by – and/or separation from – significant others” (American Psychological Association, 2013). Furthermore, the early rejection experiences proposed to underlie RS have been identified within the invalidating environments frequently observed in the childhood of people with BPD (Crowell, Beauchaine, & Linehan, 2009). Finally, research indicates that people with BPD are hypersensitive to social exclusion (Domes et al., 2008; Gratz, Dixon-Gordon, Breetz, & Tull, 2013; Renneberg et al., 2012), which may be explained by the cognitive-affective processing bias proposed in RS.

Current review

Since a seminal study showed RS was higher in participants with BPD compared to healthy controls (Staebler, Helbing, Rosenbach, & Renneberg, 2011), several studies have attempted to replicate the finding and explore how RS mediates cognitive-affective processing in people with BPD (Boldero et al., 2009; Miano, Fertuck, Arntz, & Stanley, 2013; Zielinski & Veilleux, 2014). A recent meta-analysis identified a moderate pooled correlation of BPD symptoms and RS (r = .413, $p < 0.001$; Gao et al., 2017) however, the review only included correlational data and participants were more often drawn from non-clinical populations. It is important to consider comparisons between clinical and control groups to draw stronger conclusions.

Given the recent proliferation of research in the area, this review aims to explore the validity of researching RS as an underlying factor associated with BPD by exploring whether RS is truly elevated in people with BPD. The review will explore whether early childhood rejection is a risk factor for elevated RS, in order to understand whether the full model can help explain the link between childhood maltreatment and BPD. Specifically, the review asks:

1. Is elevated rejection sensitivity associated with Borderline Personality Disorder (BPD), defined as a BPD diagnosis or high number of BPD features; and
2. Is elevated rejection sensitivity linked with past childhood rejecting experiences?

Whilst the Needs Threat Scale (Williams, 2009) and Interpersonal Sensitivity Questionnaire (Boyce & Parker, 1989) are thought to capture RS, both include constructs broader than RS, such as shyness (Boyce & Parker, 1989) and meaningful existence (Williams, 2009). Accordingly, only studies employing the RSQ will be considered here, in line with previous research (Rosenbach & Renneberg, 2011). Studies were restricted to adult populations for consistency across questions and reports of retrospective childhood experiences were chosen, excluding studies reporting on concurrent experiences of rejection. This is most consistent with the RS model (i.e. childhood experiences affect trait RS) and allows for stronger causal conclusions.

Method

The PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines are used to report this review. Details of the protocol were registered on PROSPERO and can be accessed at: https://www.crd.york.ac.uk/prospero/display_record.asp?ID=CRD42017065936.

Search strategy

Electronic databases (PsycNet, PubMed, Web of Science and SCOPUS) were searched individually for each question on 7th July 2017 and 24th April 2018. Searches were restricted to English publications. Question one employed the search terms: “rejection sensitivity” OR “sensitivity to rejection” OR “rejection” AND “Borderline Personality Disorder” OR “Borderline Characteristics” OR “Borderline States”. Question two employed the search terms: “rejection sensitivity” OR “sensitivity to rejection” AND “maltreat*” OR “abuse*” OR “neglect” OR “peer rejection” OR "parental rejection" OR “maternal rejection” OR “paternal rejection” OR “trauma*”. Reference lists of included texts were checked for relevant publications. Authors were contacted to access unpublished data.

Study selection

Inclusion criteria. Papers were included if they: (a) included participants with a diagnosis of BPD and a healthy comparison group or measured BPD traits within non-clinical populations (Question 1); (b) included a measure of past childhood rejection experiences, including trauma, emotional neglect and abuse, and parental/peer rejection (Question 2); (c) employed the Rejection Sensitivity Questionnaire (RSQ; Downey & Feldman, 1996) or adaptations (e.g. ARSQ) to measure RS; (d) were published in peer-reviewed journals, conference papers or doctorate-level dissertations; and (e) were reported in English.

Exclusion criteria. Papers were excluded if: (a) participants were less than 18 years old; (b) the study design was an individual case study, qualitative, or assessing effectiveness of pharmacological treatments; or (c) they reported on reviews or were theoretical. Unpublished data was excluded if quality could not be assessed.

Selection process. Titles and abstracts were imported to a reference management system and independently screened for eligibility and remaining duplicates. A second reviewer screened 20% of abstracts for each search. Inter-rater agreement was good for the first search ($k = .74$) and moderate for the second ($k = .53$). Raters met to resolve disagreements and it was acknowledged that exclusion criteria for the second search had not specified that reports of rejection experiences should be retrospective. Accordingly, the second search's exclusion criteria were refined and disagreements were resolved.

Remaining full texts were reviewed for inclusion. A second reviewer assessed 20% for each search. Perfect agreement was achieved for both. Where it was suspected that study samples overlapped, research authors were contacted for clarifications. Meta-analysis was conducted for the first search, as outcomes from the second were too heterogeneous for meaningful comparison. Papers were included in the meta-analysis if reported statistics allowed calculation of effect sizes. Where partially overlapping samples were indicated, only the largest sample was included.

Data extraction and quality assessment

Data was extracted by the first author using a piloted data extraction form. Primary summary measures include correlational data between measures of BPD or childhood rejecting experiences and RS, or difference in mean RSQ between target

and controls groups. Secondary measures include other relevant statistical analyses.

Quality was assessed using adapted versions of the Newcastle-Ottawa Quality Assessment Scale for case control (Wells et al., 2000) and cross-sectional studies (Herzog et al., 2013) (Appendix A2). Studies that scored between 0 and 3 were considered low quality, moderate quality between 4 and 5, good quality between 6 and 7, and excellent quality between 8 and 10. A second-rater repeated data extraction and quality assessment for 20% of the papers and perfect agreement was achieved.

Quantitative analysis

Standard effect sizes of association between RS and BPD (*r*) were extracted or calculated using available data, as this was considered most relevant for analysis of continuous measures. Where subscales of RS were reported, a summary effect was calculated. Outcomes were converted to Fisher's Z and the standard error calculated. Transformations were conducted using methods from Borenstein et al (2009).

Some papers employed multiple statistics or control groups. If all statistics were included in one meta-analysis, samples may partially overlap and the assumption of independence violated. Accordingly, these statistics were identified and separate analyses were run for correlational data, case-control data with healthy controls, case-control data with clinical controls and an overall meta-analysis (excluding overlapped samples, prioritising correlational data). As an additional check for assumptions of independence, studies that took place in the same institution or were contributed to by similar authors were identified. Three sets of potentially overlapping samples were identified. Authors of the papers were contacted to determine which samples were independent of each other. Contacted authors confirmed that studies conducted in Berlin, Germany did not overlap (Gutz, Renneberg, Roepke & Niedeggen, 2015; Rosenbach & Renneberg, 2015; Staebler et al, 2011), but BPD samples in three studies conducted in Mannheim, Germany did overlap (Bungert, Koppe, et al., 2016; Bungert, Liebke et al, 2015; Thome et al, 2016). As the authors contacted were not certain of the extent of this, all three are reported in the narrative review and are highlighted grey in tables. Only the study with the largest sample was included in the meta-analysis (Bungert, Liebke, et al., 2015). Authors from studies conducted in New York, USA did not reply (Chesin, Fertuck, Goodman, Lichenstein, & Stanley, 2014; Fertuck et al, 2013).

Due to expected heterogeneity in study samples, random-effects meta-analyses were conducted to estimate effect size using Stata Version 15 (StataCorp, 2017), employing the user-contributed command "metan" (Harris et al., 2008). Cohen's (1992) guidelines of interpreting *r* were used, assuming 0.1 is a small effect, 0.3 is medium and 0.5 large. Funnel plots were created and Eggers test computed to assess for risk of publication bias (Egger, Smith, Schneider, & Minder, 1997). Trim and fill statistics (Duval & Tweedie, 2000) were calculated to correct this, where relevant.

The independent measure of inconsistency (I^2) indicated high heterogeneity of effect sizes. A meta-regression was conducted to estimate how covariates affect between-study heterogeneity using the "metareg" command (Harbord & Higgins, 2009). In step 1, potential covariates were entered independently, before entering all significant covariates in a multivariate analysis in step 2.

Results

Question 1: Is elevated RS associated with BPD, defined as a BPD diagnosis or high number of BPD features?

Data selection. Searches yielded 580 articles and 118 were included for full-text review. Of these, 87 papers were excluded. Thirty-one full texts, incorporating 34 data sets, were included in the review (Figure 1.1).

Study Characteristics.

Study Design. Thirteen data sets compared clinical and control groups: pooled sample = 438 people with BPD (*k* = 33.69; range = 14-77) and 426 controls (*k* = 34.54; range = 15-76). Seven data sets included a clinical control: pooled sample = 248 participants (*k* = 35.43; range = 13 – 119). Twenty-one correlated BPD symptoms with RS in non-clinical samples: pooled sample = 4268 participants (*k* = 203.24; range = 87-596). Studies were conducted in Western countries. Where studies were conducted in similar locations or with similar authors, authors were contacted to identify overlapped samples. Three BPD samples partially overlap (Bungert, Koppe, et al., 2015; Bungert, Liebke, et al., 2015; Thome et al., 2016). With regards quality assessment, two studies were rated as excellent, twelve rated as good, nineteen were moderate and one was low quality (see Appendix A3 and A4).

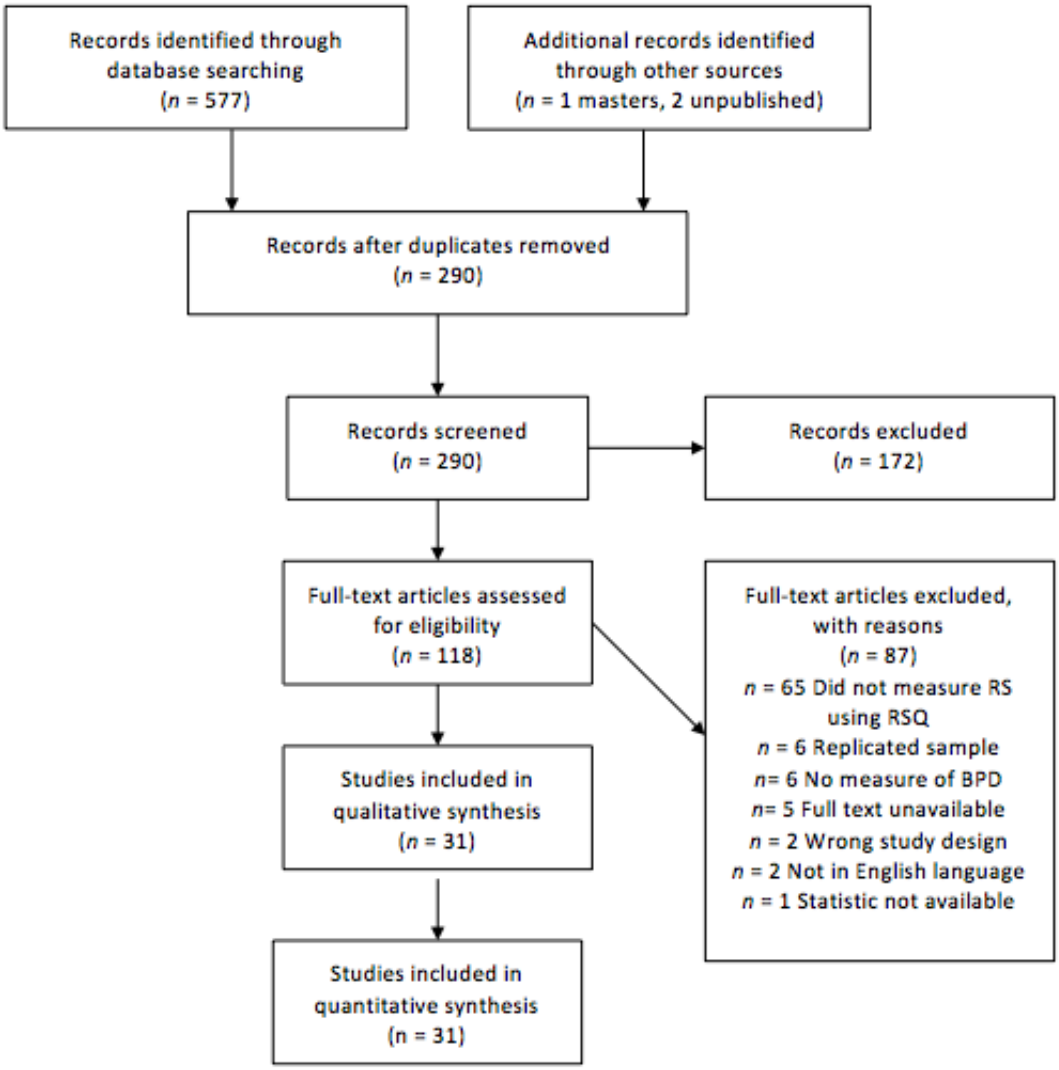

Figure 1.1. PRISMA flow chart for Question 1

Sample Characteristics. BPD and control samples were similar in age; correlational samples were younger on average as they typically recruited students. Most studies controlled for at least one demographic variable, including matching groups and checking for significant differences between groups across measures/variables. However, a significant limitation across studies was the recruitment of representative cases; there is an over-representation of women across all sample types, particularly the BPD sample. See Table 1.1 and Appendix A5 for demographic variables and Table 1.2 for full outcomes.

People with BPD were recruited from clinical (*n* = 5) and community groups (*n* = 4), with two recruiting from a mix. Two studies did not report recruitment methods. Studies differed in the inclusion of individuals undergoing BPD treatment. Three studies only included people who were not taking psychiatric medication, five

studies included a mix of people who were/were not taking medication, and five did not report this. Furthermore, three studies only included inpatients, two studies only included outpatients, and one included a mix (seven did not report). Of those that reported exclusion criteria, all excluded people with a history of psychosis, developmental disorder or organic impairment. Additional exclusion criteria included: current substance use (*n* = 7), pregnancy (*n* = 2) and PTSD (*n* = 5).

Healthy control groups were typically recruited from community samples (*n* = 5), students (*n* = 1) or both (*n* = 4) (two did not report). One study did not include a healthy control (Chesin et al., 2015). The majority of studies recruited with mixed methods (*n* = 7) and three recruited using one method only (online, at a public event, university database). Three did not provide details. Of those that provided details of exclusion criteria (*n* = 10), nine excluded participants with current or past Axis I or II diagnoses (one study defined past as 'previous 10 years', others referred to lifetime occurrence). One study excluded people who met over three diagnostic criteria for PD. Six studies recruited an additional hospital control, including people with depression, remitted BPD, avoidant personality disorder, social anxiety and general mental health outpatients.

Correlational studies largely recruited students (*n* = 16), with three recruiting from community samples and two recruiting a mix. Community samples were recruited from online platforms (*n* = 2), a pre-existing cohort study (*n* = 1), or mixed methods (*n* = 2). Finally, two studies recruiting from student populations invited people with a high number of BPD features (Selby, Ward, & Joiner, 2010; Skinner, 2014).

Measures.

When measuring RS, the majority of studies used the RSQ (*n* = 17). An amended version of the RSQ was employed in some cases (*n* = 6). A version of the RSQ adapted to consider adult rather than student scenarios was also used (ARSQ; *n* = 8), particularly in case control studies, and sometimes translated to other

Table 1.1.
Table Describing Demographic Information across Different Populations for Question 1

Characteristic	**Total**	**Case control**			**Correlational**
	Total (*n* = 5385)	BPD group (*n* = 438)	Healthy control (*n* = 426)	Clinical control (*n* = 248)	Community (*n* = 4273)
Mean age (SD)	27 (6.76)	29.17 (7.84)	28.01 (8.17)	33.40 (9.22)	23.72 (4.29)
% Female	74%	94%	90%	68%	71%

languages (*n* = 3). Of note, the names RSQ and ARSQ appeared to be used interchangeably in some studies.

The Structured Clinical Interviews for DSM-IV Axis I/II Disorders (SCID I/II; First, Gibbon, Spitzer, & Benjamin, 1997) and International Personality Disorder Examination (IPDE; Loranger, 1997) were used to identify BPD in case-control studies. Generally, the same method of assessment was used for case and control samples. However, two studies only used screening tools for the control (Fertuck, Grinband, & Stanley, 2013; Jobst et al., 2016) and some studies did not provide enough information to determine (Bungert, Koppe, et al., 2015; Bungert, Liebke, et al., 2015; Rosenbach & Renneberg, 2015; Staebler et al., 2011; Winter, Koplin, & Lis, 2015). In cross-sectional studies, the Personality Assessment Inventory – Borderline Features (PAI-BOR; Morey, 1991) was used frequently (*n* = 10), followed by the SCID-II-Screen (*n* = 3) and other screens.

Table 1.2.
Table Summarising Demographic Information, Measurement Tools and Outcomes for Included Studies in Question 1

Authors	Participant group and demographics	Outcome measure	Key findings	Effect size (*p*)	Quality
Ayduk et al. (2008) Study 1 USA Cross-sectional	Students N=379; M^{age} =21.21; SD=3.57; 64% F	BPD: PAI-BOR RS: RSQ	1) No. of BPD symptoms **correlated** with RS. 2) Association was significant in people with low executive control (EC) (B= .66, *t*(374) = 3.54, *p* = .005) but not high EC (*b* = −.11, *t* < 1, *p* > .60). **General Linear Modelling**	*r* = .29 (<.001)	6 Good
Ayduk et al. (2008) Study 2 USA Cross-sectional	Community sample from cohort study N=104, M^{age}= 38.88, SD=2.01, 63% F	BPD: PAI-BOR RS: RSQ (amended for non-students)	1) No. of BPD symptoms **correlated** with RS. 2) Association was significant in people with low EC (B= 1.43, *t*(100) = 4.81, *p* < .0001) but marginally significant in people with high executive control (B = .63, *t*(100) = 1.94, *p* = .055). **General Linear Modelling.**	*r* = .43 (<.001)	7 Good
Beeney, Levy, Gazke-Kopp & Hallquist (2014) USA Case control	**BPD** (*n*=23) M^{age}=31.84, SD=9.1, 100% F; **CG 1**: MDD (*n*=13), M^{age} = 32.12, SD = 8.8; 100% F; **CG 2**: Community (*n*= 21), M^{age} =27.78, SD = 11.74, 100% F	BPD: SCID-I & IPDE RS: ARSQ	1) Sample with BPD had significantly higher RS than HC *F*(2,59) = 5.99, *p* < .005. **ANOVA.** 2) Sample with BPD did not have significantly different scores from MDD group. **ANOVA.**	*d* = 1.03 (<.05) *d* = .31 (>.05)	5 Mod.
Berenson et al (2009) Study 2 USA Cross-sectional	USA college students N=87, M^{age} = 22.74, SD = 5.57, 79% F	BPD: IPDE-SQ RS: ARSQ	1) No. of BPD features significantly **correlated** with RS in non-clinical sample.	*r* = .42 (<.001)	5 Mod.
Berenson, Dochat et al (2016)[b] USA Case control	**BPD:**(*n* =64), 80% F; **CG:** community (*n*=60), 72% F M^{age} =32.12, SD =10.6	BPD: SCID-I and SID-P-IV RS: ARSQ	1) BPD sample RS significantly higher than HC (*t* = 9.927, *p* = .000). **T-test** 2) Sub-sample of people with BPD showed no significant difference compared to small sample with APD (*n* = 24, 54% F) (*t* = -1.03, *p* > .05; Berenson, Gregory, et al., 2016). **T-test**	*d* = 1.76 (<.001) *d* = -.2 (*n.s.*)	8 Exc.

Berlingo (2015)[a] USA Cross-sectional	USA college students (N = 344), 72% F	BPD: PAI-BOR RS: ARSQ	1) No. of BPD features **correlated** with RS in a non-clinical sample.	*r* = .34 (<.001)	4 Mod.
Boldero et al (2009) Study 1 Australia Cross-sectional	Australian students (N = 101) M^{age}=20.64, SD = 4.55, 70% F	BPD: BPD-Q RS: RSQ	1) No. of BPD features **correlated** with RS in a non-clinical sample. 2) Higher RS predicted BPD when neuroticism statistically controlled (F_{change}(1, 96) = 9.76, *p* = 0.002). **Hierarchical multiple regression.**	*r* = .63 (<.001)	5 Mod.
Boldero et al (2009) Study 2 Australia Cross-sectional	Australian students (N=131) M^{age}=20.1, SD=4.37, 71% F	BPD: BPD-Q RS: RSQ	1) No. of BPD features significantly **correlated** with RS in a non-clinical sample.	*r* = .45 (<.001)	5 Mod.
Brown (2014)[a] USA Cross-sectional	Undergraduate students (N = 98) M^{age} = 20	BPD = PAI-BOR RS = RSQ	1) No. of BPD features was not significantly **correlated** with RS.	*r* = .30 (*n.s.*)	5 Mod.
Bungert, Koppe et al (2015) Germany Case control	Unmedicated **BPD** (*n* = 20) M^{age}= 28.7, SD= 7.8,100% F; **CG**: Community (*n* = 20) M^{age}= 29.2, SD= 7.5, 100% F	BPD: IPDE RS: ARSQ (German)	1) Sample with BPD had significantly higher RS than HC (*t* = -6.8, *p* <.001). **T-test.**	*d* = 2.14 (<.001)	6 Good
Bungert, Liebke et al (2015) Germany Case control	Outpatient **BPD** (*n* = 77) M^{age}= 28, SD = 6.3, 100% F; **CG 1**: Remitted BPD (*n* = 15) M^{age}= 29.2, SD= 4.7, 100% F; **CG 2**: Community (*n* = 75) M^{age}= 26.8, SD= 6.6, 100% F	BPD: IPDE and BSL-23 RS: ARSQ (German)	1) BPD sample RS significantly higher than HC (*t* = 14.42, *p* < .001). **T-test** 2) Acute BPD sample RS higher than remitted BPD, approaching significance. No significant difference when symptom severity controlled (*p* >.999). **ANCOVA** 3) Symptom severity **correlated** with RS across all groups. (TG: *r* = .3; CG1: *r* = .62; CG2: *r* =. 24 (all *p* < .05)). 4) Correlation mediated by self-esteem (BPD-A: z = 2.12, *p* = .004; CG1: z = 2.36, *p* =.018; CG2: z = 2.16, *p* = .031) **Hierarchical regression (SOBEL z-test).**	*d* = 2.36 (<.001) *d* = .52 (.056)	6 Good
Thome et al (2016) Germany Case control	Unmedicated **BPD** (*n* = 36) M^{age}= 26.6, SD= 5.4, 100% F; **CG**: community (*n* = 36) M^{age}= 26.8, SD= 5.2, 100% F	BPD: IPDE RS: ARSQ	1) Sample with BPD had significantly higher RS than HC (*t* = 10.8, *p* < .001).**T-test**	*d* = 2.57 (<.001)	7 Good

Chesin, Fertuck, Goodman, Lichenstein & Stanley (2015) USA Case control	**BPD** and lifetime mood disorder (*n* = 60) M^{age}= 30.4, SD= 10.6, 82% F; **CG:** Lifetime mood disorder (*n* = 25) M^{age}= 35.7, SD= 11.2, 56% F	BPD: SCID-I/II RS: ARSQ	1) Sample with BPD had significantly higher RS than sample with lifetime MDD without BPD (*t*(82) = -3.28, *p* = .002). **T-test.** 2) RS predicted BPD when interaction with emotional neglect/abuse considered i.e. RS predicted BPD in people with low past emotional neglect. (B = –0.02; SE(B) = 0.01; $\chi^2(1) = 4.28$; *p* = 0.04) **Hierarchical Regression.**	*d* = .83 (0.002)	5 Mod.
De Panfilis, Meehan, Cain & Clarkin (2016) Study 1 USA Cross-sectional	USA college students (N=596) M^{age}= 21.2, SD= 5.3, 75% F (Based on full sample (N= 625))	BPD: PAI-BOR RS: RSQ	1) Number of BPD features shows a small, but significant, correlation with RS in a non-clinical sample. **Pearson correlation.** 2) RS did not have a significant direct effect on BPD (c′ = .003, *p* = .52). Effect of BPD on RS mediated by interpersonal distress (CI: .004 -.011, R^2 = .12, *p* < .001), and moderated by EC i.e. indirect effect is greatest in people low in EC. **Mediation analysis**.	*r* = .11 (<.01)	7 Good
De Panfilis, Meehan, Cain & Clarkin (2016) Study 2 USA Cross-sectional	Community sample (N = 562) M^{age}= 33.7, SD = 11.5, 59% F	BPD: PAI-BOR RS: ARSQ + questions about anger	1) Number of BPD features significantly **correlated** with anxious and angry RS, in non-clinical sample. 2) Replicated moderated-mediation model in Study 1 when separating anxious and angry RS. **Mediation analysis**	*r* = 0.23, 0.43 (<.01)	8 Exc.
Erbe (2014)[a] USA Case control	Unmedicated **BPD** (*n* = 14) M^{age}= 27.29, SD= 4.62,100% F; **CG**: Community (*n* = 15) M^{age}= 23.67, SD= 3.56,100% F	BPD: SCID-I/II RS:RSQ	1) BPD group had significantly higher rates of RS compared to HC (*t*(27)=4.96, *p* <.001). **T-test.**	*d* = 1.82 (<.001)	7 Good
Fertuck, Grinband & Stanley (2013) USA Case control	**BPD** (*n* = 17) M^{age}= 35.29, SD= 12.56, 76.5% F; **CG:** College students (*n* = 19) M^{age}= 25.89, SD= 10.7, 68.4%F	BPD: SCID-I/II RS: RSQ	1) BPD group had significantly higher rates of RS compared to HC (*t* (35) = 3.4, *p* = .002). **T-test.**	*d* = 1.16	6 Good
Gardner, Qualter, Stylianou & Robinson (2010) UK Cross-sectional	Undergraduate students and community sample (N = 150) M^{age}= 26.4, SD = 10.5, 70% F	BPD: PDQ – 4 BPD RS: ARSQ	1) Number of BPD symptoms and RS **correlated**.	*r* = .47 (<.001)	4 Mod.

Goodman et al (2014) USA Cross-sectional	Undergraduate students (N=133) Median Age = 19, 67% F	BPD: SCID-II self report RS: RSQ	1) Number of BPD symptoms significantly **correlated** with RS. 2) RS and the interaction between RS and EAN predict number of BPD symptoms (B = -.003, 95% CI (-.005, -.001), se(B) = .001, RR = .997, $X^2(1) = 7.95$, $p = .005$) i.e. association stronger amongst people who reported less than average EAN. Physical abuse or neglect was not predictive **Poisson Regression.**	$r = .23$ (.01)	5 Mod.
Gutz, Renneberg, Roepke & Niedeggen (2015) Germany Case control	unmedicated, inpatient **BPD** ($n = 25$) M^{age}= 25, SD = 6.56, 92% F; **CG1:** SAD (n=25) M^{age}= 28, SD= 4.82, 84% F, **CG 2**: community (n= 25) M^{age}= 26, SD =4.44, 88% F	BPD: SCID-I/II RS: RSQ (German)	1) Total RS higher in sample with BPD than people with either SAD or HC (F = 23.04, $p = .001$). **ANOVA** 2) BPD sample had significantly higher rates of rejection expectancy than SAD and HC ($d = .62$, 1.9, $p < .05$) (F = 23.84, $p = .001$), and significantly higher rejection anxiety than HC ($d = 1.31$, $p < .05$) (F = 11.97, $p = .001$). No significant difference with SAD. **ANOVA**	$d = .70$, 1.92 (<.05)	7 Good
Jobst et al (2016) Germany Case control	**BPD:** ($n = 20$) M^{age}= 29.85, SD= 7.46, 100% F**; CG**: community ($n = 19$) M^{age}= 30.42, SD= 10.55, 100% F	BPD: SCID-II RS: RSQ	1) BPD group had significantly higher rates of RS compared to HC ($t = -8.47$, $p = <.001$) **T-test.**	$d = 2.75$ (<.001)	6 Good
Lazarus, Southward & Cheavens (2016) USA Cross-sectional	Undergraduate students (N = 127) M^{age}= 19.5, SD= 2.5, 100% F	BPD: PAI-BOR RS: RSQ	1) Number of BPD features significantly **correlated** with RS.	$r = .26$ (<.01)	5 Mod.
Masland (2016)[a] USA Cross-sectional	**Community**: High BPD ($n = 30$), M^{age} = 23.2, 80% F; Low BPD ($n = 47$) M^{age} = 36.9, 68.1% F	BPD: SNAP-2 RS: ARSQ	1) Number of BPD features significantly **correlated** with RS. 2) People with high levels of BPD features had greater RS than people with low levels of BPD ($t = 3.22$, $p = .002$, $d = .74$). **T-test**	$r = .51$ (<.01)	5 Mod.
Meyer, Ajchenbrenner & Bowles (2005) UK Cross-sectional	Undergraduate students and community (N = 156) M^{age} = 30.2, 72% F	BPD: SCID-II-SQ RS: RSQ (adapted)	1) Number of BPD features significantly **correlated** with rejection anxiety and rejection expectation.	$r = .21$, .32 (<.01)	5 Mod.

Miano, Fertruck, Arntz & Stanley (2013) USA Cross-sectional	Undergraduate students (N = 95) M^{age} = 19.8, SD = 2.95, 69% F	BPD: SCID-II SQ RS: RSQ	1) Number of BPD features **correlated** with RS. 2) When split into RS subscales **correlations** were not significant (expectation: *r* = .12; anxiety: *r* = .14, *p* >. 05). 3) Non-clinical sample with high no. of BPD features (i.e. above median) had significantly higher RS than those with low BPD features (*z* = −2.9, *p* = .002, one- tailed).**Mann-Whitney U.**	*r* = .19 (<.05)	5 Mod.
Peters, Smart & Baer (2015)[c] USA Cross-sectional	Undergraduate students (N = 411) M^{age} = 19.8, SD = 2.09, 68% F	BPD: PAI-BOR RS: RSQ	1) Number of BPD features significantly **correlated** with RS. 2) Dysfunctional responses to emotion accounted for large portion of effect of RS on PAI-BOR. **Hierarchical multiple regression (Bootstrapping).**	*r* = .48 (<.001)	7 Good
Rosenbach & Renneberg (2014)[d] Germany Cross-sectional	Undergraduate students (N = 193) M^{age}= 25, SD = 5.4, 79% F	BPD: QTF RS: RSQ (German)	1) Number of thoughts and feelings characteristic of BPD significantly **correlated** with RS.	*r* = .53 (<.001)	5 Mod.
Rosenbach & Renneberg (2015) Germany Case control	**BPD** inpatient (*n* = 30) M^{age}= 30.5, SD= 8.43, 93.3% F; **CG 1:** MDD Outpatient (*n* = 27) M^{age} = 41.6, SD = 14.5, 66% F; **CG 2:** community (*n* = 30) M^{age}= 33, SD= 10.4, 73.3% F	BPD: MINI (German) and SCID-II RS: RSQ (German)	1) Sample with BPD had significantly higher RS than both sample with MDD and HC (F(2, 85) =19.52, *p* < .001,). **ANOVA** 2) There was no significant difference between MDD and HC (*p* = .70). **ANOVA.**	*d* = .91, 1.89 (<.01)	3 Low
Selby, Ward & Joiner (2010) USA Cross-sectional	Students (proportion invited due to high scores on SCID-II) (N = 94) M^{age} = 18.75, SD = 1.05, 78.7% F	BPD: SCID-II RS: RSQ	1) Number of BPD symptoms significantly **correlated** with RS. 2) The effect of BPD on emotion dysregulation was indirect via RS (β =.08, *z* = 1.93, *p* < .05, one-tailed). **Structural Equation Modelling.**	*r* = .44 (<.05)	5 Mod.
Skinner (2014)[a] USA Cross-sectional	Students (proportion with high PAI-BOR) (N = 147) 77% F	BPD: PAI-BOR RS: RSQ	1) Number of BPD symptoms significantly **correlated** with RS.	*r* = .21 (.01)	5 Mod.
Staebler, Helbing, Rosenbach & Renneberg (2011) Germany Case control	**BPD** inpatient (*n* = 26) M^{age}= 27.27, SD= 7.69, 100% F; **CG1**: Outpatient group (*n* = 119) M^{age}= 36.5, SD= 10.9, 63.2% F; **CG 2**: students and community (*n* = 76) M^{age}= 29.33, SD= 9.47; 92.1% F	BPD: SCID – II and QTF RS: RSQ (German)	1) Sample with BPD had significantly higher RS than HC, and the outpatient group (F(5,199) = 70.224, *p* < 0.001, c^2 = 0.638) . **ANOVA** 2) RS **correlated** significantly with thoughts and feelings characteristic of BPD amongst all groups, but weakest amongst sample with BPD. (Total: *r* = .79, *p* <.001; BPD: *r* = .32, *p* = .033; CG1: *r* = .47 *p* <.001; CG2: *r* = .53, *p* <.001)	*d* = 3.25, 1.69 (<.001)	5 Mod.

Tragesser, Lippman, Trull & Barrett (2008) USA Cross-sectional	Undergraduate students (N = 118) M^{age}= 19.17, SD= 1.78; 67% F (based on full sample, *n* = 121)	BPD: PAI-BOR RS: RSQ	1) Number of BPD symptoms significantly **correlated** with RS**.**	*r* = .34 (<.001)	5 Mod.
Winter, Koplin & Lis (2015) Germany Case control	**BPD** (*n* = 30) M^{age}= 26.1, SD= 4.76, 100% F**; CG**: community (*n* = 30) M^{age}= 26.13, SD = 7.29; 100% F	BPD: IPDE RS: RSQ	1) Sample with BPD scored significantly higher on RS than healthy controls (*t*.= -7.94, *p* = <.001) **T-test.**	*d* = 2.19 (<.001)	6 Good
Zielinski & Veilleux (2014) USA Cross-sectional	Undergraduate students (N=165) M^{age}= 19.09, SD= 1.14, 64% F	BPD: MSI-BPD RS: RSQ	1) Number of BPD symptoms **correlated** with RS in a non-clinical sample.	*r* = .28 (<.01)	5 Mod.

Note. Q = Quality; TG = target group; CG = Control Group; BPD = Borderline Personality Disorder; MDD = Major Depressive Disorder; RSQ = Rejection Sensitivity Questionnaire; ARSQ = Adult Rejection Sensitivity Questionnaire; EC = Executive Control; EAN = Emotion abuse and neglect; SCID-I = Structure Clinical Interview for DSM-IV Axis I; SCID-II = Structure Clinical Interview for DSM-IV Axis II; PAI-BOR = Personality Assessment Inventory-Borderline Features; IPDE = International Personality Disorder Examination; SCID II – SQ = Structure Clinical Interview for DSM-IV II – Screener Questionnaire; BPD-Q = Borderline Personality Disorder Questionnaire; IPDE-SQ = International Personality Disorder Examination – Screening Questionnaire; BSL-23 = Borderline Symptom List; PDQ-4-BPD = Personality Diagnostic Questionnaire-4-Borderline Personality Disorder; QTF = Questionnaire of Thoughts and Feelings; MSI-BPD = McLean Screening Instrument for Borderline Personality Disorder; SID-P-IV = Structured Interview for DSM-IV Personality; SNAP-2 = Schedule for Non-adaptive and Adaptive Personality -2

[a] Doctoral dissertation; [b] This paper describes the full sample reported as partial samples in two separate papers (Berenson, Downey, Rafaeli, Coifman, & Paquin, 2011; Berenson, Gregory, et al., 2016). Although not reported in the paper, data was obtained via email correspondence (Berenson, August 2017); [c] Full statistical data obtained via email correspondence (Peters, July 2017); [d] Correlation not reported in publication. Full statistical data obtained via email correspondence (Rosenbach, September 2017)

Narrative synthesis.

Case control studies. When compared with healthy controls, people with BPD had significantly higher RS. Large effect sizes were detected (d = .83 – 3.25), and not impacted by quality (see Table 1.3). In one study, people with acute BPD had higher RS than people with remitted BPS, approaching significance, although this attenuated when controlling for symptom severity. Furthermore, two studies reported community samples with high levels of BPD had significantly higher RS than those with low levels of BPD.

People with BPD also had significantly higher RS than all clinical groups including people with social anxiety disorder (d = .7; Gutz et al., 2015) and people attending outpatient mental health teams with other mental health conditions (d = 1.67; Staebler et al., 2011). Three studies found RS was significantly higher in people with BPD compared with people with a current mood disorder (d = .83 - 2.28; Chesin et al., 2015; Rosenbach & Renneberg, 2015; Staebler et al., 2011). However, 50% of the BPD sample had concurrent MDD in Chesin et al.'s (2015) study, whilst only 32% of the MDD sample had current MDD. This finding was not replicated in one other study (Beeney et al., 2014), although the sample of people with MDD was small. One study indicated higher RS in a sample with Avoidant Personality Disorder compared with BPD, but this was non-significant (Berenson, Gregory, et al., 2016).

***Cross-sectional*.** In non-clinical samples, RS correlated with BPD features, with variation in effect sizes (r = .11 - .63). One study did not find a significant effect, though the effect size remained moderate (r = .3). Large effect sizes were found in studies of moderate quality, however quality did not differentiate moderate and small effects.

Four data-sets identified the effect of RS on BPD was mediated by executive control; RS was related to number of BPD features in individuals low on executive control (Ayduk et al., 2008; De Panfilis et al., 2016). Similarly, one study identified a significant correlation when neuroticism was controlled for (Boldero et al., 2009), whilst another indicated the effect of RS on BPD symptom severity was mediated by self-esteem (Bungert, Liebke, et al., 2015). Finally, one study found the association to be higher in individuals who report lower than average emotional neglect (Goodman, Fertuck, Chesin, Lichenstein, & Stanley, 2014). Only one study considered individual symptoms of BPD; in this study 'dysfunctional responses to emotion' accounted for large portion of effect of RS on PAI-BOR (Peters, Smart, & Baer, 2015).

Table 1.3.
Link Between RS and BPD, Case-Control According to Study Quality in Question 1

Study	Significant Association?		Strength of association			Q	N
	Y	N	Lrg	Med	Small		
Case-control studies							
Berenson, Dochat et al (2016)	Y		X			8	124
Erbe (2014)	Y		X			7	29
Gutz et al. (2015)	Y		X			7	50
Thome et al. (2016)	Y		X			7	72
Bungert, Koppe et al. (2015)	Y		X			6	40
Bungert, Liebke et al. (2015)	Y		X			6	52
Fertuck et al. (2013)	Y		X			6	36
Jobst et al. (2016)	Y		X			6	39
Winter et al. (2015)	Y		X			6	54
Beeney et al (2014)	Y		X			5	57
Chesin et al. (2015)	Y		X			5	85
Staebler et al. (2011)	Y		X			5	102
Rosenbach & Renneberg (2015)	Y		X			3	60
Correlational, community sample							
De Panfilis et al. (2016, study 2)	Y			X[a]	X[b]	8	562
Ayduk et al. (2008, Study 2)	Y			X		7	104
De Panfilis et al. (2016, study 1)	Y				X	7	596
Peters et al. (2015)	Y			X		7	411
Bungert, Liebke, et al. (2015)	Y				X	6	75
Ayduk et al. (2008, Study 1)	Y				X	6	379
Berenson et al. (2009)	Y			X		5	87
Boldero et al. (2009, Study 1)	Y		X			5	101
Boldero et al. (2009, Study 2)	Y			X		5	131
Brown (2014)		N		X		5	98
Goodman et al. (2014)	Y				X	5	133
Lazarus et al. (2016)	Y				X	5	127
Meyer et al. (2005)	Y			X[c]	X[a]	5	156
Miano et al. (2013)	Y				X	5	95
Rosenbach & Renneberg (2014)	Y		X			5	193
Staebler et al. (2011)	Y		X			5	76
Tragesser et al. (2008)	Y			X		5	118
Zielinski & Veilleux (2014)	Y				X	5	165
Berlingo (2015)	Y			X		5	344
Gardner et al. (2010)	Y			X		4	150
Selby et al. (2010)	Y			X		4	94
Skinner (2014)	Y				X	4	147
Correlational, clinical sample							
Bungert, Liebke et al. (2015)	Y			X		6	77
Staebler et al. (2011)	Y			X		5	26

Note. Q = Quality; [a] Anxious expectations of rejection; [b] Angry expectations of rejection; [c] Expectations of rejection

Quantitative synthesis.

Main analyses. Outcomes from the meta-analyses are summarised in Table 1.4. The main meta-analysis (k = 36) indicates a moderate to large relationship between BPD and RS. Visual inspection of the funnel plot (Figure 1.2) suggested asymmetry and this was confirmed with Eggers test ($p < .001$). Trim and fill correction was undertaken and 13 studies were added (Figure 1.3). Following correction, effect size was moderate.

Meta-analysis of correlational outcomes (k = 27) indicated a moderate pooled effect size of .37. Similarly, visual inspection of the funnel plot indicated some asymmetry and this was confirmed with Eggers test ($p = .015$), suggesting publication bias. Trim and fill analysis identified a moderate effect size following correction. With regards case-control studies, where healthy controls were employed (k = 10) meta-analysis indicated a large effect size. In studies where clinical controls were employed (k = 7), the pooled effect size was moderate. Neither meta-analysis indicated publication bias against small studies ($p > .05$), so corrections were not performed. (See Appendix A6 for forest and funnel plots).

Table 1.4.
Table describing Outcomes from Meta-Analyses

Meta analysis	**# ES**	**Total effect size**	**Mean Fisher's Z**	**95% CI**	**Z value**	**I^2**	**Eggers test sig.**
Main analyses	36	.424	.452	.385 - .520	13.08***	81.7%	.001
Corrected	*49*	*.305*	*.315*	*.240 - .389*	*8.259****	-	-
Correlational studies	27	.354	.370	.312 - .429	12.40***	72.6%	.015
Corrected	*36*	*.278*	*.285*	*.221 - .348*	*8.737****	-	-
BPD vs. healthy control	10	.703	.874	.750 - .997	13.92***	63.3%	.279
BPD vs. clinical control	7	.286	.294	.111 - .478	3.14**	76%	.143

Note. Total effect size refers to the mean *r* back-transformed from Fisher's Z. Corrected results refer to outcomes corrected for publication bias. ES = Effect Size; CI = Confidence Intervals; I^2 = Independent measure of inconsistency
**$p < .01$; *** $p < .001$

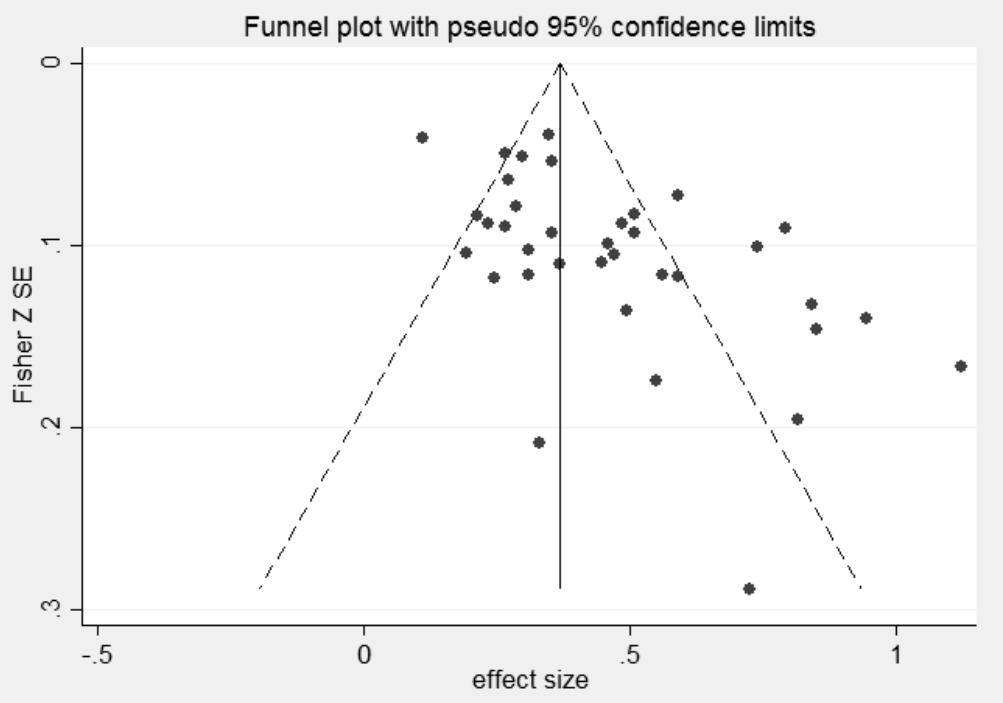

Figure 1.2. Funnel plot for main meta-analysis

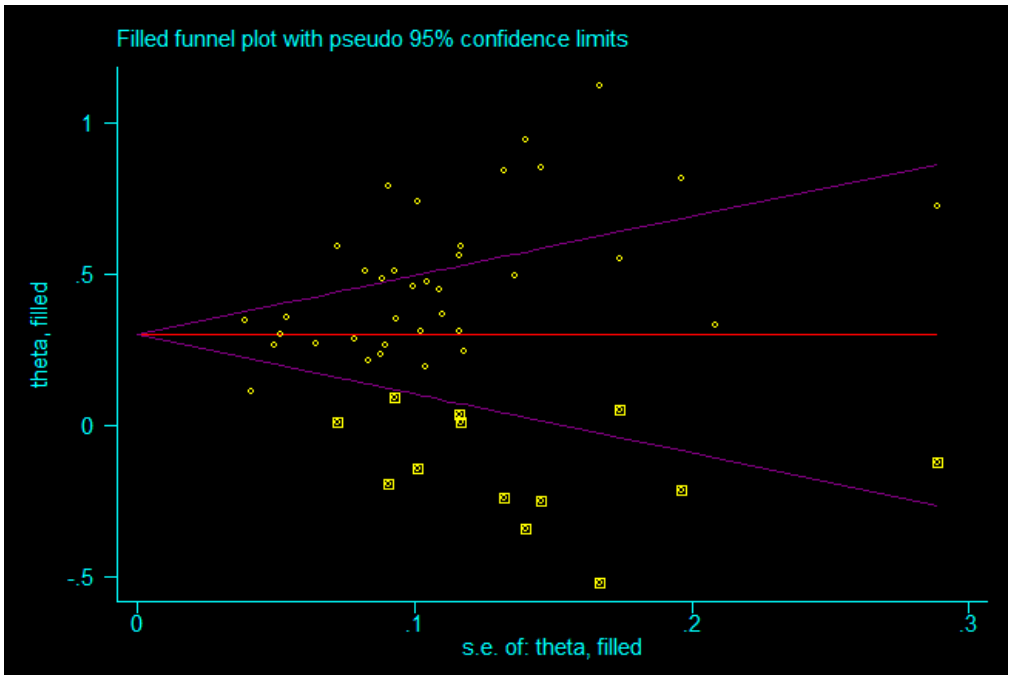

Figure 1.3. Filled funnel plot following trim and fill corrections

Meta-regression. Variability attributed to heterogeneity was high in the main meta-analysis, correlational analysis and case-control analysis with clinical controls, and moderately high for analysis of case-control studies with healthy controls. Univariate meta-regressions were run for all analyses with the predictors: mean age,

percentage of females, RS measure and quality. Study design and population type were included where appropriate. See Appendix A7 for outcomes.

Outcomes indicated heterogeneity was significantly predicted in the main meta-analysis by age, percentage of females, study design and population type (p < .05). However, when combined in a multivariate analysis, only population type approached significance. This factor correlated highly with other predictors, potentially explaining loss of significance. The overall effect of population type based upon an omnibus test was significant, F(3,32) = 11.57, p <.001, with mixed samples of clinical and non-clinical participants having significantly greater effect sizes than community (F(1, 32) = 34.52, p < .001), BPD (F(1, 32) = 8.32, p < .01), or other clinical samples (F (1, 32) = 7.24, p = .01). However, heterogeneity remains high, suggesting other factors account for differences. Meta-regression for correlational and case-control studies did not indicate significant predictors of heterogeneity. This is unsurprising as these meta-analyses controlled for study design.

Question (2): Is elevated RS linked with past childhood rejecting experiences?

Study selection. Searches yielded 338 articles, and 50 were included for full-text review. Of remaining papers, 38 were excluded. Twelve full-texts were included in the review (see Figure 1.4).

Study characteristics.

Study design. Twelve data sets were identified, consisting of a pooled sample of 3188 participants (k = 259.25, range = 85 – 882). Mean age of participants was 25.1 (SD: 5.54) and 47% of participants were female. Eleven studies employed a correlational, questionnaire design and one study employed a case-control design. The majority of studies were conducted in the USA (n = 8), and a minority in Europe (Germany, n = 2; Turkey, n = 1). See Appendix A5 for a summary of demographical variables and Table 1.5 for a summary of outcomes. In terms of quality assessment, seven studies were rated good quality and five were moderate (Appendix A8).

Sample characteristics. The majority recruited a student-only sample (n = 6). Other samples included a mix of student and community samples (n = 3), a community sample of men (n = 1), highly sexually active gay men (n = 1) and people with major depressive disorder (n = 1). Two studies included participants with diagnosed BPD (pooled sample = 137), and three studies explored BPD symptom

severity in non-clinical samples. Three samples were deemed representative and only one study reported sample size justification. The remaining could not be considered representative, limiting generalisability.

Eight studies controlled for at least one demographic variable and five studies controlled for an additional variable. Similar to correlational studies in Question 1, inclusion criteria meant all studies included a self-report measure of RS. Finally, statistical tests were usually reported adequately and confidence intervals were included in four studies.

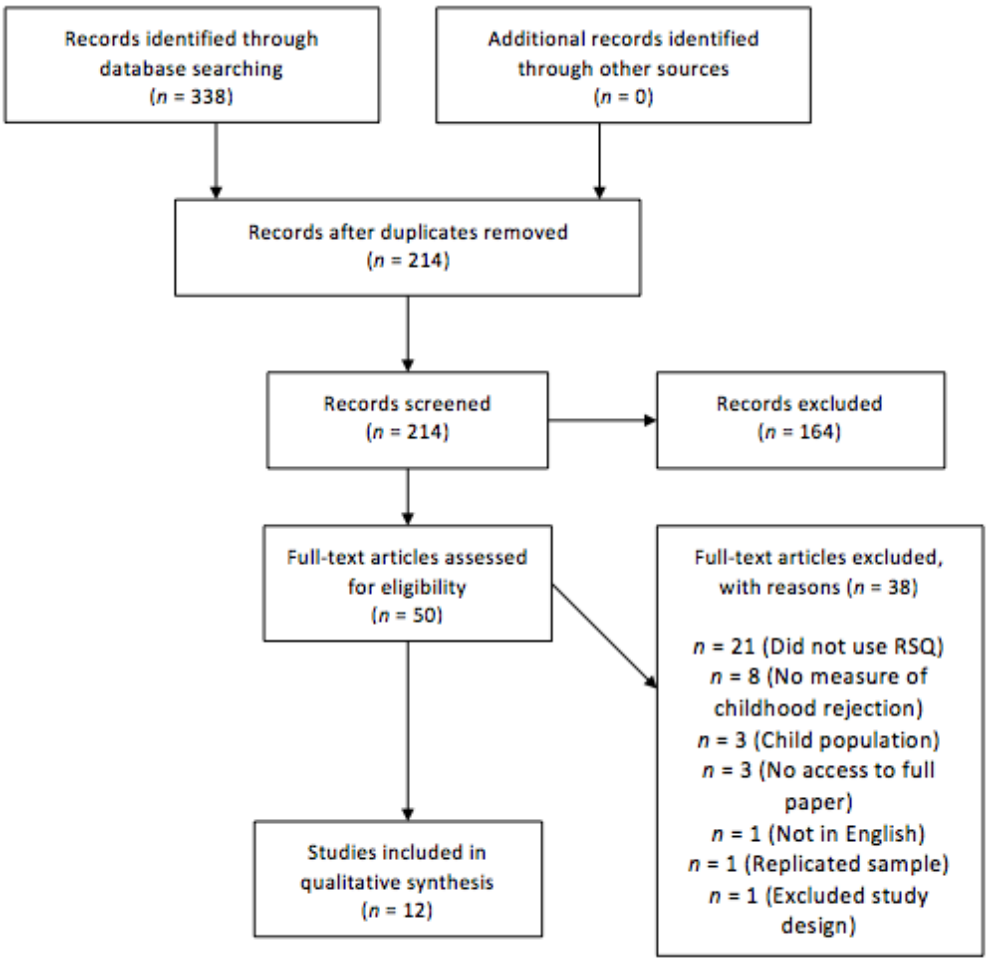

Figure 1.4. PRISMA flow chart for Question 2

Measures. The RSQ was the most commonly administered measure of RS (*n* = 7). An amended version of the RSQ was used three times and the ARSQ twice. Childhood rejecting experiences were defined in several of ways, most commonly as childhood abuse. Parental and peer rejection was the second most common definition (*n* = 4) and parental divorce was measured once. The Childhood Trauma Questionnaire (CTQ; Bernstein et al., 2003) was used frequently (*n* = 7),

incorporating subscales of emotional neglect, emotional abuse, physical neglect, physical abuse and sexual abuse. Two studies amalgamated the emotional neglect and abuse subscales. Alternative measures of emotional maltreatment and physical abuse were each used once. For further details, see Appendix A5.

Table 1.5.
Table Summarising Demographic Information, Measurement Tools and Outcomes for Included Studies in Question 2

Authors and design	Participant groups and demographics	Measuring instruments	Key findings	Quality
Bungert Liebke et al. (2015) Germany Cross-sectional	Outpatient **BPD** (*n* = 77) M^{age}= 28.3, SD= 6.3, 100% F; **CG 1**: Remitted BPD (*n* = 15) M^{age}= 29.2, SD= 4.7; 100% F; **CG 2**: Community (*n* = 75) M^{age} = 26.8, SD = 6.6, 100% F	Childhood rejection: CTQ-SF RS: ARSQ BPD: IPDE and BSL	1) Frequency of childhood trauma events significantly correlated with RS in non-clinical samples. Strongest correlation - emotional neglect (*r* = .55, *p* <.001). This effect was not significant in sample with current or remitted BPD (*r* = .20, .33. *p* > .05). Only significant correlation was physical neglect and symptoms in acute BPD groups (*r* = .27, *p* < .05). 2) RS did not affect the link between childhood trauma and BPD symptom severity in non-clinical samples (z =.93; *p* =.353). **Hierarchical regression and Sobel Z test.**	6 Good
Chesin, Fertuck, Goodman, Lichenstein & Stanley (2015) USA Cross-sectional	**BPD** and lifetime mood disorder (LMD; *n* = 60) M^{age}=30.4; SD= 10.6, 82% F; **CG:** LMD, no BPD (*n* = 25) M^{age}=35.7, SD=11.2, 56% F	Childhood rejection: CTQ-SF (EA and EN, summed) RS: RSQ BPD: SCID-II	1) Frequency of childhood emotional neglect significantly **correlated** with RS (*r* = .45, *p* <.01). Other subscales were not significant (PA: *r* = .17, *p* > .05; SA: *r* = .18, *p* > *.05*). 2) RS and EAN interact to predict BPD (β = –0.02; SE(B) = 0.01; $\chi^2(1) = 4.28$; *p* = 0.04). **Hierarchical logistic regression**	6 Good
Erozkan (2015) Turkey Cross-sectional	Undergraduate students (N = 882) M^{age} = 21.18, SD = 2.07, 52% F	Childhood rejection: CTQ –SF RSQ: Turkish	1) Frequency of all forms of childhood trauma positively correlated with RS. P value not reported. (EA: *r* = .49 ; EN: *r* = .47; PA: *r* = .39; PN: *r* = .32; SA: *r* =.3) 2) Childhood trauma predicted RS (χ^2=816.33, df=318, χ^2/df=2.56, *p*=.000, RM-SEA=.05, GFI=.95, AGFI=.93, NFI=.96, NNFI=.97, CFI=.96, IFI=.97, RMR=.07, SRMR=.06. **Structural equation modelling.**	4 Mod
Feldman & Downey (1994) USA Cross-sectional	USA college students (N = 212) M^{age}= 19.47, SD = 2.59, 54% F	Childhood rejection: CTS (PA scale) RS: RSQ	1) Frequency and severity of PA between parents (Frequency: *r* =. 2; Severity: *r* = .2; *p* <.01) and towards the child (Frequency: *r* = .3; Severity: *r* = .21; *p* < .01) significantly **correlated** with RS	5 Mod.

Goodman et al (2014) USA Cross-sectional	USA College students (N = 133) Median Age = 19, 67% F	Childhood rejection: CTQ-SF (EA and EN, summed) RS: RSQ BPD: SCID-II-SQ	1) Frequency of EAN (r = .37, p < .01), and PN (r = .22, p < .01) significantly **correlated** with RS. PA (r = .13, p > .05) did not correlate significantly. 2) EAN and RS independently predict BPD symptoms, as does their interaction (stronger effect for people less than average EAN). (χ^2 = 6.40, df = 1, p < .05). **Poisson Regression.**	6 Good
Hernandez, Trout & Liu (2016)[a] USA Cross-sectional	USA College students (N = 185) M^{age}= 19.65, SD = 1.48, 75% F	Childhood rejection: CTQ (EA, PA, SA) RS: RSQ	1) Frequency of EA (r =.39, p <.001) and PA (r =.2, p <.01) significantly **correlated** with RS. Correlation with frequency of SA (r =.07, p > .05) was not significant. 2) RS mediated link between childhood EA and current interpersonal stress (β = 0.03, 95% CI = 0.01–0.06). **Mediational analysis**	6 Good
Ibrahim, Rohner, Smith & Flannery (2015) USA Cross-sectional	USA College students (N = 271) M^{age} = 21, SD = .78-1.87, 65% F	Childhood rejection: Adult PARQ Mother and Adult PARQ Father RS: RSQ	1) Degree of parental rejection significantly **correlated** with RS (Female: paternal, r = 35; maternal, r =.45; Male: paternal, r =.45; maternal, r =.43). 2) Rejection from parents explains variance in RS, and this effect is stronger for same-sex parent. **Hierarchical multiple regression**	6 Good
Masland (2016)[b] USA Case control Doctoral Dissertation	Community: High BPD: (n = 30), M^{age} = 23.2; 80% F; Low BPD (n = 47) M^{age} = 36.9, 68.1% F	BPD: SCID-II RS: ARSQ	1) Frequency of EA and EN significantly correlated with RS across the full sample (EA: r = .28, p < .05; EN r = .30, p < .01). No other subscale significantly correlated 2). Only frequency of PA correlated with RS in a high BPD sample (r = .64, p < .01).	5 Mod.
Pachankis et al (2015) USA Cross-sectional	Highly sexually active gay men (N = 374) M^{age} = 36.9, SD = 11.4, 0% F	Childhood rejection: Mother-father-peer RS: RSQ (adapted for gay men)	1) Degree of childhood peer rejection significantly **correlated** with gay-related RS (r = .29, p <.001). Association confirmed in **path analysis**.	7 Good

Pierce, Abbey, & Wegner (2018) USA Cross-sectional	Single, young men in in metropolitan community (N = 423) M^{age} = 23.6, SD = 5, 0%F	Childhood rejection: Early Trauma Inventory Self-Report RS: RSQ	1) Number of acts of childhood emotional maltreatment perpetrated by care providers **correlated** with RS (r = .17, p <.01) 2) Link between childhood emotional maltreatment and RS mediated by hostility (B = .23, CI =.13 - .39) **Path analysis**	4 Mod.
Rosenbach & Renneberg (2014) Germany Cross-sectional	University students (N = 193) M^{age} = 25, SD = 5.4, 79% F	Childhood rejection: PRSQ[c] & Questionnaire of rejection by peers RS: RSQ (German) BPD: QTF	1) Degree of parental (r = .27, p <.001) and peer rejection (r = .36, p < .001) both significantly **correlated** with RS. Parental punishment did not correlate significantly with RS (r = .11, p > .05). 2) RS fully mediated link between parental rejection and BPD symptoms (B_i = .13, p <. 001, CI=.06 -.23). RS partially mediated link with peer rejection (B = 011, p < .001, CI=.006 - .02). Current social support also significant mediator. **Mediational analysis.**	5 Mod.
Schaan & Vogele (2016) Germany Case Control	**TG** = divorced parents; **CG** = undivorced parents (N = 186) M^{age} = 22.3, SD = 3.75, 85% F	Childhood trauma: Divorce RS: RSQ	1) Adults whose parents divorced as children have higher RS (d = .35, p < .05) and CTQ scores (d = .72, p < .05) than those without divorced parents. **Welch test** 2) RS (B = .213, CI = .01 – 17) and CTQ (B = .232, CI = .06 - .27) mediated effect of childhood divorce on adult mental health. **Mediation analysis**	6 Good

Note. TG = Target group; CG = Control Group; Mod. = Moderate; RSQ = Rejection Sensitivity Questionnaire; ARSQ = Adult Rejection Sensitivity Questionnaire; CTQ = Childhood Trauma Questionnaire; CTS = Conflict Tactics Scale; PARQ = *Parental Acceptance-Rejection Questionnaire; PRSQ = Parental-Representation-Screening-Questionnaire;* MFP = Mother-Father-Peer Scale; BPD = Borderline Personality Disorder; IPDE = International Personality Disorder Examination; SCID-I = Structure Clinical Interview for DSM-IV Axis I; SCID-II = Structure Clinical Interview for DSM-IV Axis II; BSL = Borderline Symptom List; QTF = Questionnaire of Thoughts and Feelings; SCID – Screen = Structure Clinical Interview for DSM-IV – Screen; EA = Emotional Abuse; EN = Emotional Neglect; EAN = Emotional Abuse and Neglect; PA = Physical Abuse; PN = Physical Neglect; SA = Sexual Abuse.

[a] Correlational data from Massing-Schaffer, Liu, Kraines, Choi, and Alloy (2015); [b] Correlations obtained through email correspondence (Masland, April 2018) [c] Maternal and Paternal rejection subscales amalgamated. Also for punishment scale

Narrative review. Outcomes are summarised according to study quality in Table 1.6 and discussed according to rejection type.

Abuse.

Non-clinical sample. Emotional abuse and/or neglect (EAN) consistently correlated with RS in a non-clinical sample despite study quality, though the range was large (*r* = .17 - .49). There was less consistency in outcomes on other forms of abuse. Only one study considered the overall CTQ and found a significant medium correlation (Bungert, Liebke, et al., 2015). Four studies indicated physical abuse significantly correlated with RS (Bungert, Liebke, et al., 2015; Erozkan, 2015; Feldman & Downey, 1994; Hernandez et al., 2016) and two studies indicated physical neglect correlated significantly (Bungert, Liebke, et al., 2015; Goodman et al., 2014). One study reported no significant relationship between physical abuse

Table 1.6.
Summary of Outcomes from Studies Included in Question 2, in Order of Quality

Study	**Association found?**				**Mediation effect of RS on BPD**	**Quality**	**N**
	Emo	Phys	Sex.	Rej.			
Non-clinical samples							
Pachanakis et al. (2015)	-	-	-	Y	-	7	374
Bungert, Liebke et al. (2015)	Y – score across subscales			-	N	6	167
Hernandez et al. (2016)	Y	Y	N	-	Y[a]	6	185
Ibrahim et al. (2015)	-	-	-	Y	-	6	271
Goodman et al. (2014)	Y	Y[b]	-	-	Y	6	133
Schaan & Vogele (2016)	-	-	-	Y[c]	-	6	186
Rosenbach & Renneberg (2014)	-	-	-	Y	Y	5	193
Feldman & Downey (1994)	-	Y	-	-	-	5	212
Masland (2016)	Y	N	N	-	-	5	77
Erozkan (2015)	Y	Y	Y	-	-	4	882
Pierce et al. (2018)	Y	-	-	-	-	4	423
Clinical samples							
Bungert, Liebke et al. (2015)	N	N	N	-	-	6	77
Chesin et al. (2015)	Y	N	N	-	Y[d]	6	60
Masland (2016)	N	Y[e]	N	-	-	5	77

Note. Emo. = Emotional abuse/neglect; Phys. = Physical abuse/neglect; Sex. = Sexual abuse; Rej. = Rejection. [a] Mediated effect on interpersonal distress; [b] Physical neglect only; [c] Divorce; [d] When interacting with emotional neglect/abuse; [e] Physical abuse only

and RS in a non-clinical population (Goodman et al., 2014), although this was of lower quality. Sexual abuse was considered on two occasions and excluded once due to low numbers (Goodman et al., 2014). One study did not identify a significant relationship (Hernandez et al., 2016), although a lower quality study indicated that sexual abuse did correlate with RS (Erozkan, 2015).

Clinical samples. EAN correlated with RS in a mixed sample of people with BPD and/or MDD (Chesin et al., 2015), but not in a pure BPD sample (Bungert, Liebke, et al., 2015) or community sample with clinically significant levels of BPD (Masland, 2016). Physical neglect was only measured in one study due to low internal reliability and a small correlation was found with RS (Bungert, Liebke, et al., 2015). Physical abuse showed a strong correlation in a community sample with clinically significant levels of BPD traits (Masland, 2016). Sexual abuse did not correlate with RS (Bungert, Liebke, et al., 2015; Chesin et al., 2015). As there are limited studies with clinical samples, it is difficult to identify patterns of quality.

Rejection by others. Rejection by others was measured in non-clinical samples and studies were moderate to good quality. Parental rejection significantly correlated with RS on the two occasions it was measured (r = .27-.45) (Rosenbach & Renneberg, 2014), with one study suggesting that rejection from the same sex parent predicted more variance in RS (Ibrahim et al., 2015). Parental punishment was measured once and did not significantly correlate with RS (Rosenbach & Renneberg, 2014). Peer rejection was measured twice and each found a significant correlation (Pachankis et al., 2015; Rosenbach & Renneberg, 2014).

Link with BPD. Four studies considered the relationship between childhood rejecting experiences, RS and BPD. Another study considered adult interpersonal stress. One study concluded that RS did not mediate the link between childhood abuse on BPD in a clinical group, or BPD symptom severity in a non-clinical group (Bungert, Liebke, et al., 2015). However, this study did not consider sub-types of childhood abuse. In contrast, two studies measuring EAN in isolation report the interaction between RS and EAN significantly predicted BPD diagnosis in clinical populations (Chesin et al., 2015), and BPD symptom frequency in non-clinical populations (Goodman et al., 2014), although the latter suggested an attenuated effect for those reporting greater than average abuse. In non-clinical samples, studies identified a meditational role of RS in the link between parental rejection and BPD symptoms (Rosenbach & Renneberg, 2014) and emotional neglect and interpersonal stress (Hernandez et al., 2016).

Discussion

Outcomes from this systematic review and meta-analysis indicate that RS is linked with BPD across clinical and non-clinical populations. Some forms of childhood rejecting experiences are associated with RS, particularly emotional neglect and abuse, which may mediate the effect on later BPD.

Elevated RS and high BPD features or diagnosis

Overall, the meta-analysis indicated a moderate relationship between RS and BPD (*r* = .305) following correction for publication bias. Outcomes from separate meta-analyses based on study design confirmed a moderate relationship between RS and BPD in correlational studies and large effect size in studies comparing BPD groups with a healthy control. Additionally, samples with BPD showed moderately greater RS when compared with samples of people with other mental health conditions, except avoidant personality disorder which showed greater RS, although this was not significant. Meta-regression identified that case-control studies incurred significantly greater effect sizes than other study designs. Whilst it is important to consider non-clinical samples, given the subjectivity of thresholds for BPD (Zielinski & Veilleux, 2014), the finding that clinical BPD groups demonstrate significantly higher RS than control samples adds to the evidence base and provides a broader understanding of the experience of BPD across the spectrum. Furthermore, whilst RS is linked with other mental health problems (Gao et al., 2017), these outcomes indicate that the rate of RS is still larger in BPD. However, further research is required as outcomes were not always consistent, possibly due to methodological limitations in recruiting samples without co-morbidities.

These findings are in line with previous reviews which suggest RS is linked with BPD (Gao et al., 2017; Rosenbach & Renneberg, 2011). However, the effect size in this meta-analysis is smaller than the effect size reported previously (r = .437; Gao et al., 2017). The current study's effect sizes prior to correction for publication bias were similar (*r* = .424), therefore differences may be related to trim-and-fill outcomes; an additional 13 outcomes were filled in this meta-analysis, compared with 3 in Gao et al.'s (2017). Furthermore, the current review extends upon Gao et al.'s (2017) with an additional 12 papers, including statistical comparisons between clinical and healthy control groups and grey literature. Additionally, this review paid particular attention to studies where sample populations overlapped and removed them accordingly.

The moderate to high effect sizes are somewhat unsurprising given the similarity between RS and BPD diagnostic criteria. However, many studies indicated that RS is a distinct entity from BPD. For instance, shared variance between the two reached only 40% in one study (Boldero et al., 2009) and 10% in another (Tragesser et al., 2008), and not all participants with BPD reported elevated RS (Winter et al., 2015). Indeed, some argue the behavioural manifestation of RS distinguishes the two concepts, i.e. elevated RS without behavioural responses would not be considered BPD (Ayduk et al., 2008; Chesin et al., 2015). This distinction is important when one considers the interaction with executive control: RS may only manifest as BPD in people with low levels of executive control (Ayduk et al., 2008; De Panfilis et al., 2016). This could also explain why one study found RS correlated most with 'dysfunctional responses to emotion' items on the PAI-BOR (Peters et al., 2015), as those with RS and low EC may be more likely to demonstrate maladaptive interpersonal behaviours. Studies also suggested the effect of RS on BPD could be mediated by self-esteem (Bungert, Liebke, et al., 2015) and degree of abuse (Goodman et al., 2014), or impacted by level of neuroticism (Boldero et al., 2009), although the relatively small amount of studies means it is difficult to draw conclusions.

Accordingly, whilst there is some conceptual overlap, the review supports the theoretical relationship between RS and BPD. In particular elevated RS may lead to maladaptive interpersonal responses that make relationships difficult to maintain, such as self-blame, defensiveness (Feldman & Downey, 1994), mistrust (Miano et al., 2013) and difficulties updating threat thresholds (Olsson et al., 2013), initiating a self-fulfilling prophecy. Furthermore, RS could manifest in people with BPD as ambivalence towards relationships, simultaneously avoiding relationships for fear of rejection yet trying to secure intimacy, leading to both withdrawal and clingy or risky behaviour designed to maintain attachments (Staebler et al., 2011). Further research into the impact of RS on BPD is warranted and identifying potential mediators may be important.

Elevated RS and past childhood rejecting experiences

Limited evidence means it is difficult to draw strong conclusions for the second question. Remembered childhood rejecting experiences appear to contribute to adult RS, however effect magnitudes for different forms should be explored further. Currently, six studies measuring emotional abuse and neglect (EAN) (Chesin et al., 2015; Erozkan, 2015; Goodman et al., 2014; Hernandez et al., 2016; Masland, 2016; Pierce et al., 2018) and four studies measuring childhood

rejection (Ibrahim et al., 2015; Pachankis et al., 2015; Rosenbach & Renneberg, 2014; Schaan & Vögele, 2016) indicated a significant correlation with adult RS, with mixed quality. Four studies also indicated a link with physical abuse and/or neglect (Erozkan, 2015; Feldman & Downey, 1994; Goodman et al., 2014; Hernandez et al., 2016), however the majority of these studies were rated at moderate to low quality, which may limit generalisability.

Based on the original model (Downey & Feldman, 1996), the documented link between rejection experiences and BPD (Ball & Links, 2009) was hypothesised to be mediated by RS. A small number of studies explored the full model and outcomes are mixed. The highest quality study does not support the hypothesis (Bungert, Liebke, et al., 2015) however, the definition of childhood rejecting experiences was broad (i.e. overall childhood trauma) and the link between rejecting experiences and BPD in their clinical sample was non-significant. In contrast, two studies reported that an interaction between EAN and RS predicts BPD in clinical samples and BPD features in non-clinical samples (Chesin et al., 2015; Goodman et al., 2014). Furthermore, RS mediated the impact of emotional neglect on adult interpersonal stress in a non-clinical sample (Hernandez et al., 2016), in line with theories proposed by Downey and Feldman (1996) and Staebler et al (2011).

Interestingly, the link between RS and EAN was not supported in a community sample with clinically relevant levels of BPD (i.e. 5 or more items on the SCID-II), although it is recognised this sample did not have clinical diagnoses and mediational analysis was not conducted (Masland, 2016). Furthermore, the interaction between EAN and RS was less predictive of BPD in people who experienced greater than average abuse (Goodman et al., 2014) and one study did not find a relationship between any childhood abuse and RS in clinical samples (Bungert, Liebke, et al., 2015), although the latter study used a broad definition on childhood abuse. Furthermore, sample sizes of clinical groups remain low in comparison to community groups, increasing the risk of underpowered analyses and Type II errors. Nevertheless, this raises questions about the proposed linear relationship. Instead, dispositional and environmental factors may interact to predict BPD. Environmental factors may impact RS until a “qualitative switch” over to BPD, where RS can no longer account for symptom severity (Bungert, Liebke, et al., 2015, p.9). This may be linked with individual vulnerability factors such as executive control, where rejecting experiences may affect RS, but development of BPD may be buffered by greater EC (Goodman et al., 2014).

Limitations of the literature

Limitations to included studies mean outcomes may not be generalisable. Across studies, outcomes were dependent on self-report. Objective methods of assessing RS may be valuable in overcoming this limitation and should be considered further. Furthermore, measures of childhood rejecting experiences were retrospective and self-reported, increasing risk of response bias and inaccurate reporting. Some longitudinal studies have been conducted in childhood (London et al., 2007; Moretti, Bartolo, Craig, Slaney, & Odgers, 2014; Zimmer-Gembeck, 2015), however these tend to focus on peer rejection and do not extend to adulthood. Long-term longitudinal studies focussing on emotional neglect and rejection are required to confidently test the model.

A representative sample was rarely recruited, leading to an over-representation of females, young adults and students. Gender was more equally represented in the second question. Additionally, there was a mixed response to including people undergoing treatment for BPD. Treatment may have an impact on RS in this sample, however this has not yet been studied. It will be important to consider this in future research to recognise the impact on study heterogeneity. Overall, few studies commented on power analyses and sample sizes were particularly small for the first question. Accordingly, it is difficult to determine power and reliability of statistical outcomes, such as risk of Type II errors.

Furthermore, non-randomised studies are not subject to guidelines such as CONSORT. Accordingly, information provided by authors can be limited, making it difficult to assess risk of bias accurately. The paper attempted to overcome this by employing recommended risk of bias assessment tools and making contact with authors to clarify missing information (Higgins & Green, 2011), however not all authors replied.

Finally, between-study heterogeneity was moderate to high across meta-analyses. Meta-regression identified age, percentage of females, study design and population group as significant predictors in the main meta-analysis, however multivariate meta-regression only found population group approaching significance and heterogeneity remained high. In line with Gao et al.'s (2017) findings, no other predictors were significant in other analyses. Accordingly, other factors may be influencing variance in effect size.

Limitations of the review

This review is protocol-driven and extends upon previous reviews (Gao et al., 2017; Rosenbach & Renneberg, 2011) by adding additional data-sets, identifying overlapping samples, and assessing the full model of RS as it applies to BPD. However, the methodological design created some limitations. To determine temporal order and generate comparable outcomes across research questions, the review excluded papers where participants were under the age of 18. Accordingly, reports of childhood rejection were retrospective in nature. Furthermore, inclusion criteria limited studies to those employing the RSQ as this was deemed the most representative tool (Rosenbach & Renneberg, 2011). However it may be possible to assess for RS more objectively via observational paradigms.

Although grey literature and unpublished data was included in this review, it was limited to studies with enough detail to be quality assessed. Some unpublished statistics were made available to the main researcher, but could not be included for this reason. Other unpublished data may also be available by researchers not included in the review.

Finally, a small number of studies were included in the meta-regression (k = 7-36), which may limit the power of statistical analysis. Therefore, conclusions regarding between-study heterogeneity should be drawn cautiously.

Implications for research

Outcomes from this review report an association between childhood rejecting experiences and RS, and between RS and BPD symptoms across clinical and non-clinical populations. This meets the first criteria for Hill's (1965) criteria for demonstrating causality: strength of association. With regards other criteria, the review attempted to control for temporality by including retrospective reports of childhood rejection, however longitudinal studies are required to confirm this. Further studies may wish to consider factors such as dose-response and assess consistency by recruiting representative or non-Western samples.

The review introduced some mediating factors, although this is limited to a handful of studies. Further research may consider these factors further, including mediation between childhood rejection, RS, and BPD, or the full relationship of all three. This may be important to understand why childhood rejection is only linked with BPD in a proportion of people and may offer further evidence for the multifactorial development of personality disorders.

Implications for clinicians/clinical practice

The review indicates that RS is linked with BPD and should not be considered a purely diagnostic factor. Given research suggesting RS has a direct impact on cognitive and behavioural responses, clinical practice may consider targeting RS in an attempt to reduce BPD symptom frequency or severity. Understanding this process may be an intervention in itself and may offer a non-blaming explanation of interpersonal difficulties.

To our knowledge, research has not extended to clinical management of RS, but mediating factors, such as executive control and self-esteem, may offer a starting point. Alternatively, therapeutic interventions may focus on thought challenging within a cognitive-behavioural paradigm, or improving mentalization to help understand own and others' mental states (Bateman & Fonagy, 2004). Other suggestions include attributional retraining and improving emotional literacy (Staebler et al., 2011).

Second, heightened RS may impact therapeutic relationships, given the cognitive-affective responses associated with perceived rejection. Although research has not considered this directly, research into the effect of RS on intimate relationships suggests heightened RS can lead to hostility or withdrawal if rejection is perceived (Downey & Feldman, 1996; Romero-Canyas et al., 2010). Clinicians should be sensitive to this and consider how it may be managed. Possibilities are being more conscious of language and facial expressions or explicitly reflecting on interactions (in terms of the RS model) with clients *in vivo*.

Finally, the review supports the notion that development and presentation of BPD is heterogeneous. Whilst EAN may be considered a potential factor in the development of RS, childhood rejecting experiences and RS should not be considered necessary pre-conditions. Treatment approaches to BPD should consider idiosyncratic factors and interactions.

Conclusion

This review suggests RS is linked with BPD in clinical and non-clinical populations. Accordingly, RS appears to be an important factor linked with BPD and may offer a target for intervention. Although some suggest the link is a function of the diagnostic criteria of BPD, it appears that not all individuals with BPD have heightened RS and heightened RS does not inevitably lead to BPD. Some

mediational factors are considered, including executive control, but are beyond the scope of the current review. Future research may consider this further.

Additionally, childhood rejecting experiences do appear to be linked with heightened RS, particularly EAN and rejection. The link with physical abuse was less regularly supported. However, research in this area is sparse and hampered by methodological limitations. Furthermore, few studies considered the mediating effect of RS on the relationship between childhood rejecting experiences and adult BPD and those that do report differing findings. The review indicates that further research in this area is deserved to help understand how the developmental model of RS fits with the experience of BPD.

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Improving the Treatment Approach to Mild TBI Through the Lens of Lived Experience

Service Improvement Project

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This journal was chosen for its relevance to project content, and the focus on practical applications of theoretical concepts (see Appendix B1 for submission guidelines)

Literature review

Mild traumatic brain injury (mTBI) can cause cognitive-affective consequences which often resolve independently within 3 months (Carroll, Cassidy, Holm, Kraus, & Coronado, 2004). However, a proportion of patients experience more chronic symptoms, known as Post Concussion Syndrome (PCS) (Ontario Neurotrauma Foundation, 2013). This term is controversial as aetiology and prognosis is unclear (Al Sayegh, Sandford, & Carson, 2010). For clarity, the term PCS will describe symptom experience that persists following mTBI regardless of time frame, whilst mTBI will be used to describe injury.

Symptom experience following mTBI is 'biopsychosocial': an idiosyncratic interplay between biological, psychological and social factors (Carroll, Cassidy, Peloso, et al., 2004; Ganti et al., 2014; Snell, Macleod, & Anderson, 2016; Waljas et al., 2015). A review of multivariable prognostic models suggests biological effects of mTBI have little predictive value on prognosis (Silverberg et al., 2015). Instead, premorbid mental health difficulties, distress and cognitive difficulties are key indicators of poorer prognosis, with post-injury anxiety the strongest unique predictor (Scheenen et al., 2017; Silverberg et al., 2015). To better understand, prevent and treat PCS we must explore psychosocial factors.

Maladaptive cognitions associated with mTBI, such as cognitive biases and illness perceptions, may affect prognosis and post-injury anxiety (Hou et al., 2012; Lishman, 1988; Mah, Hickling, & Reed, 2017; Whittaker, Kemp, & House, 2007). Attributing multiple 'symptoms' to mTBI, expecting these to persist and predicting greater severity of consequences increases risk of PCS (Mittenberg, DiGiulio, Perrin, & Bass, 1992; Snell, Hay-Smith, Surgenor, & Siegert, 2013; Whittaker et al., 2007). However, symptoms associated with PCS are not condition-specific, are commonly reported by healthy populations (Iverson & Lange, 2003) and are poorly understood, with little reliable information accessible to lay populations (Block, West, & Goldin, 2016). Accordingly, benign sensations may be attributed to mTBI (Hou et al., 2012), increasing negative beliefs about injury and coping, reducing confidence in symptom management, and slowing recovery.

Cognitive-behavioural theories, which suggest the way we think, feel and behave interact with physiological experience, may offer explanations and treatment of PCS. For example, cognitive-behavioural explanations of health-focussed anxiety may apply, where cognitive processes such as hypervigilance to sensation and reassurance seeking maintain symptom experience despite absence of illness

(Salkovskis & Warwick, 1986). However, as mTBI can cause physical symptoms, it may be appropriate to consider the Uncertainty in Illness model (Mishel, 1988, 1990) which suggests difficulty understanding health events increases uncertainty, leading to anxiety when threatening interpretations are made. Whilst similarities exist, the theories differ in their approach to information giving. In contrast to health anxiety, where physical illness is unlikely to be diagnosed and information may be perceived as unsatisfactory, providing information fitting with patient experience may resolve anxiety when illness uncertainty exists (Mishel, 1988, 1990), as demonstrated in individuals with 'medically unexplained' symptoms (Kornelsen, Atkins, Brownell, & Woollard, 2016). This may be particularly applicable to mTBI, as research suggests a coherent understanding of injury and recovery is important and professional reassurance can promote this (Snell, Martin, Surgenor, Siegert, & Hay-Smith, 2017).

Promising evidence suggests psychoeducation about mTBI is a cost-effective method of PCS prevention, whilst Cognitive Behavioural Therapy (CBT) can be an effective treatment (Al Sayegh et al., 2010; Kjeldgaard, Forchhammer, Teasdale, & Jensen, 2014; Potter, Brown, & Fleminger, 2016). Accordingly, whilst the uncertainty in illness model may inform prevention of PCS, CBT theory may best inform treatment following onset. However, overall evidence is limited and not sufficiently robust to offer confident support for any form of treatment (Eliyahu, Kirkland, Campbell, & Rowe, 2016; Gravel et al., 2013). Exploring the lived experience of recovery may support intervention development (Levack, Kayes, & Fadyl, 2010; Snell et al., 2017). Qualitative explorations suggest social support, validation and trustworthy psycho-education supports mTBI recovery, whilst isolation, confusion or poor understanding of the experience can perpetuate symptoms (Snell et al., 2017). However, qualitative evidence is limited to two studies internationally and more research is required to corroborate findings.

The Ontario Neurotrauma Foundation (ONF, 2013) have developed guidelines to standardise treatment following mTBI, focussing on assessment, psychoeducation and symptom-specific pharmacological and psychological treatments (Marshall, Bayley, McCullagh, Velikonja, & Berrigan, 2012; Marshall et al., 2015). UK-based services have developed mTBI clinics based on these guidelines (Singh, Venkateshwara, Batterley, & Bruce, 2013), however it is important to evaluate the interventions by considering the experience of patients receiving the service. Whilst an evaluation of a military PCS UK clinic has been completed, this may not generalise to a civilian population (Brunger et al., 2014).

The service

This study aims to evaluate the experiences and needs of patients who have attended a UK-based Mild Head Injury Clinic (MHIC) employing the ONF (2013) guidelines. The specific aims are:

- To identify whether ONF guidelines are used consistently; and
- To explore whether guidelines are meeting patient needs.

Study 1 comprises a case-note audit evaluating which guidelines the clinic uses consistently, as guideline concordance should not be assumed (Francke, Smit, de Veer, & Mistiaen, 2008). In Study 2, patient interviews were conducted to gain a greater understanding of the experience of mTBI and the effectiveness of the clinic in meeting patient needs. Study 3 analyses routine outcome measures to identify clinical change over time.

Governance and Ethical Considerations.

Ethical approval was received from the Research and Development office at the relevant NHS Trust and University of Bath Psychology Ethics Committee (ref: 16-177) (see Appendix B2).

Study 1

Method

Design. Criterion-based audit of patient case notes was conducted to evaluate the degree to which the MHIC met ONF guidelines.

Participants. Case notes for patients discharged in 2016 (*n* = 23) were collected. Case notes were excluded if assessment indicated that symptoms were not a function of mTBI (*n* = 6). A total of 17 case notes were audited.

Materials. Relevant guidelines from ONF made up a novel criterion-based checklist with two purposes: to provide a tool to enable regular audit and as a checklist to guide clinical sessions, both recognised as supporting guideline adherence (Francke et al., 2008). The checklist included 19 compulsory guidelines

(largely screens) and 36 guidelines conditional on criteria being met (typically interventions).

Procedure. Case notes were analysed by the project lead and identified as having sufficient evidence each guideline was:

- Met (including referrals to appropriate services);
- Not applicable; or
- Not met.

A second rater assessed a sample of case notes (*n* = 6). Inter-rater reliability was 59%. Variation in inter-rater reliability was largely caused by differences in coding 'not applicable' and 'no evidence'. When these categories were collapsed, inter-rater reliability improved to 80%. It was important to maintain the distinction for audit purposes, therefore results should be interpreted with caution.

Analyses. Compulsory and conditional guidelines were analysed separately. The percentage of times a compulsory or conditional guideline was met (or considered not applicable) was recorded across the whole data set to calculate overall guideline concordance. This was repeated for individual guidelines.

Results

Compulsory guidelines were met or not applicable in 57% of cases, yet concordance varied between guidelines (Table 2.1). Conditional guidelines were met or considered not applicable 58% of the time. As these were conditional on results of assessment, which were not recorded consistently, it was difficult to identify whether conditional guidelines were applicable. When rates were limited to those instances where need was assessed, concordance rate improved to 71% overall (Table 2.1). This might indicate that guideline concordance is underestimated due to missing or unclear information.

Table 2.1.
Table Describing the Percentage of Cases where Each Compulsory Guideline was Met.

Standard guideline	**Evidence guideline met**
All potential contributing factors to symptoms investigated and a management strategy considered	100%
Persons with mTBI and complicating health-related or contextual factors should be considered for early referral to a multidisciplinary treatment clinic	100%
Encouraged to gradually return to normal activity based on tolerance	100%
Assessed fatigue with focused history (questionnaires can assist with this)	100%
Screen for headaches	94%
Evaluated for cognitive difficulties with cognitive interview & validated post-concussive questionnaire (Rivermead)	94%
Screened for sleep/wake disturbance	94%
Evidence of some relevant education provided in printed material combined with verbal review	88%
Evaluation of vision, vestibular balance, coordination and/or hearing	82%
Dimensions of fatigue assessed and alternative/contributing causes considered	65%
Patient advised that they are likely to experience one or more symptoms as a consequence of mTBI and this may persist for a short period of time but is usually expected	53%
Patient advised that a full recovery of symptoms is seen in majority of cases	47%
Period of rest recommended with advice to avoid activities with risk of concussion	41%
For those slow to recover: low-level exercise recommended approx. one month post injury	26%
Second-person informant met	18%

Screened for mental health disorders	6%
Use of self-report mental health questionnaires (recommended: PHQ-9; GAD-7; PC-PTSD; PCL-CV; CAGE)	6%
Considered and evaluated relevant co-morbidities that might affect cognition	6%
Evidence of all relevant education should be provided in printed material combined with verbal review	6%
Advised that bed rest for more than 3 days is not recommended	0%
Use of cognition screening tool (MoCA)	0%

Conditional guidelines	**N**	**Evidence guideline met**
Interventions for mental health	2	100%
Interventions for fatigue	17	94%
Interventions for vestibular/vision/hearing	14	79%
Interventions for headaches	16	68%
Interventions for sleep/wake disturbance	16	58%
Interventions for cognitive difficulties	16	55%
Interventions for return to work[a]	17	32%

Note. [a] Records for all notes are reported as occupation was not recorded in case note audit.

Study 2

Method

Design. Semi-structured interviews were completed with discharged patients, designed to obtain retrospective feedback about patient experience of mTBI and whether needs were met with MHIC treatment.

Participants. Patients discharged in 2016 were invited to interview (*n* = 34). A total of 6 participants completed the interview (Table 2.2).

Table 2.2.
Table Describing Interview Participants.

Participant No.	Age	Gender	mTBI cause	Referral route	Previous head injury?
1	37	Female	Blow to head	Occupational Health	No
2	48	Male	Fall	GP	No
3	48	Male	Blow to head	Self-referral	Yes
4	87	Female	Road Traffic Accident	GP	No
5	80	Male	Subdural Haematoma	Neurology	No
6	60	Male	Fall	Head-injury charity	No

Materials. The interview schedule considered participant understanding of mTBI prior to clinic attendance, expectations and experience of the service, and clinical effects of treatment (see Appendix B3).

Procedure. Discharged patients were posted information sheets. Respondents could opt for telephone or face-to-face interviews. Full informed consent was obtained and a full debrief was given at the end (Appendix B4).

Interviews were recorded, transcribed and analysed by M.F. using thematic analysis (Braun & Clarke, 2006) within a critical realist, inductive paradigm. The analyser was a clinical psychology trainee with experience working in TBI, but with no affiliation to the MHIC. These methods assume that participant responses reflect their reality as far as possible, acknowledging interpretations by participants and analyser (Willig, 2013). See Table 2.3 for analysis procedure.

Table 2.3.
Process of Thematic Analysis

Stage of analysis	Actions involved
Familiarisation with data	Full transcripts read twice. Possible themes noted before coding.
Coding the data.	Noteworthy features coded inductively using the computer programme N*Vivo. Repeated process once full set of codes was generated. Codes were grouped on N*Vivo according to similarity.
Extracting themes	Sub-themes extracted based on similarities between codes Higher order themes developed based on links between sub-themes and knowledge of relevant theory. Development of thematic map (see Appendix B5) and review with the second author (E.M.).
Reviewing themes	Codes reviewed to evaluate fit with the themes Data-set re-read in full to re-code and assess fit with the thematic map. Modified thematic map twice and themes were defined, before a proportion were assessed by a second rater.
Credibility check	A second rater was provided with 20% of the analysed data (based on word count). This included 98 extracts of coded data plus context. The second rater was provided details of the themes, their description and subthemes. They assigned each extract to the most relevant theme. Inter-rater reliability calculated as 76%.
Finalising themes	Differences between raters were discussed and relevant modifications made. Themes were discussed with second author (E.M.). Further refinement of one theme and amalgamation of two themes to improve theme independence and conciseness (see Table 2.4)

Results

Importance of trusted information.

Effects of information. Many participants discussed the importance of having trusted information that fits with the experience of mTBI and how this improved understanding and symptom management. Participants noted:

"…until you're told, you know, what the problem is, you just sort of think, yeah it's just a bang to the head, it's no more than falling off a bike." (P1)

"It just made me feel the condition I found myself in was okay… it was a result of the injury and the brain being squashed." (P5)

Every participant commented on the experience of feeling reassured after information provision, reflecting this critical aspect of recovery.

"I think… to be able to share their knowledge with you, to express that you're not on your own… it's just reassurance… that's a very important word." (P3)

Two participants were aware of possible effects of mTBI before they emerged, due to previous experience of mTBI or timely intervention from the MHIC. They reported that this prepared them for when symptoms arose.

"I was very aware of the word 'concussion'… so when the doctor said, 'Yes, you have concussion', I thought, 'Okay, I know what I need to do'." (P3)

Table 2.4.
Table Describing Themes (including sub-themes for each)

Theme	**Description**	**Sub-themes**
Importance of trusted information	The availability of trusted information about mTBI (and MHIC) provided to the individual, which fits with the experience	Effects of information Who has information Accessibility of information
Perceptions of injury and recovery	The individual's original understanding of the injury, associated symptoms, and progression of recovery	Initial symptoms Understanding of what is happening Life changing Perceptions of recovery
Symptom management	The manner in which participants managed symptom(s)	Unhelpful strategies Guilt Confidence in management
Service evaluation	Evaluation of (a) experience of being a patient in the MHIC, and (b) treatment received	Person-centred Service met needs Referral to service

Indeed, this participant reflected:

"Had I not had that experience… I think [the MHIC] would have been invaluable in all aspects." (P3)

Who has information. Participants who had no previous knowledge of mTBI relied on the MHIC for trusted information. Other sources were either lacking or confusing. For instance, three participants noted the GP appeared to have limited understanding of mTBI or awareness that a MHIC might exist.

"I'm sure the GP seemed that she wasn't aware of the clinic [MHIC]." (P6)

However, the MHIC did not provide all desired information, particularly with regards to psychosocial interventions such as mindfulness and exercise.

"It would be nice for the clinic to identify things that would be good for me, to tell me what to do rather than me looking and asking them whether this is any good, this is any good?" (P3)

This indicates that, whilst the MHIC was perceived as having the most trusted information, it could not meet everybody's individual needs. Signposting to alternative sources could help patients.

***Accessibility of information*.** Some participants noted that information online was overly technical, which could leave people wondering, *"well, does this relate to me?"* (P6).

Many participants welcomed the "matter-of-fact" nature of the information provided at the clinic, which fit with their experience. One participant shared:

"She said everything that seemed to be right in a medical sense. Everything she suggested seems sensible and I could reply to it. I never felt out of my depth." (P4).

Nevertheless, some participants found the information provided by the clinic disorganised. For example, pictures and handwritten notes made during sessions often did not make sense when the participants re-read them.

"I had a few, a number of A4 sheets that had been printed out and shown to me, but a more, I wouldn't say professional, but you know what I mean… produced. Like a leaflet." (P2)

Perceptions of injury and recovery.

***Initial symptoms*.** Initial symptoms commonly discussed included: headache, confusion, tiredness, and fogginess. One participant also experienced vestibular difficulties.

***Understanding of what is happening*.** Whilst symptoms were similar, participants differed in how they understood them at the time. For those without prior understanding of mTBI, it was difficult to clearly describe their experience.

> *"It was vague what I was telling the doctor… I just didn't feel quite right… it was quite hard to push it because I didn't know, should I be pushing it?" (P6)*

Perceiving the effects of the injury as unexplained meant participants lost control of the ability to make informed decisions about care. Some reported worrying that other organic problems, such as dementia, caused symptoms.

> *"It's a bit scary because you think 'Is there something worse going on inside than me just having a knock to the head?'" (P1)*

> *"I was worrying quite a lot by then! I didn't worry around the accident, but as time went on, because it didn't get better… if anything it was getting worse." (P4)*

In contrast, participants who had existing knowledge of mTBI did not report this experience. They knew what to expect, were not concerned by the symptom experience and appeared to show more confidence in managing the experience.

> *"In a sense I wasn't worried about them as I was aware of them." (P5)*

> *"I was very aware of the word concussion and aware of the symptoms… I thought 'Okay, I know what I need to do'." (P3).*

***Life changing*.** A common theme emerged around the life-changing nature of mTBI. Often participants engaged in comparisons of pre and post injury selves, describing themselves as being "*completely capable*" (P1) before, or as someone who found it "*difficult to slow down and… not do work*" (P3). Accordingly, the experience of mTBI jarred with expectations of themselves and who they are.

> *"She just went "This is not the man I married, this is not the man I've known for how many years." (P2)*

"I wanted to know, well, how long does it take… before I start feeling like my old self?" (P6)

Such comparisons corroborates evidence that the "good old days" bias is reported by this population (Potter & Brown, 2012), offering support for psychosocial interventions following mTBI.

Understandably, participants often experienced feelings of worry, fear or distress following these changes, particularly about health.

"I was emotionally completely wrung out… when my wife finally managed to get in contact with the head injury clinic." (P2)

"…having gone from somebody who is completely capable of doing everything to all of a sudden having something put in your way, a blocker, you know it was really frustrating that sort of time period." (P1)

This indicates the importance of providing correct information in a timely manner to manage unnecessary distress. Such responses could reasonably be assumed to negatively impact recovery, either by affecting cognitive biases or motivation, again indicating the value of psychological intervention.

Perceptions of recovery. Participants' perceptions of recovery were evident and almost all indicated that they felt improved to some extent as a function of MHIC intervention.

"By the time I went back… I was so much better and so much happier in myself." (P4)

"I cannot emphasise enough… how effective almost immediately the treatments were." (P2)

However, several noted they were not "100%" and questioned whether they ever would be.

"I mean I am of the opinion that I will never get back to the 100% position that I was in before." (P2)

"I'd probably say now it's not 100% and never will be 100%." (P5)

Several participants made reference to the slow nature of recovery and how this did not fit with their expectations of a fast or natural recovery. This elicited frustration in some and questions about whether recovery was occurring at all.

"… I think I go through 3 weeks, maybe 4 weeks of nothing happening and then, then I go up a step and I tend to improve… I'm at the end of what feels like quite a long cycle of stagnance." (P3)

"I've really plateaued. I've got to that point where I'm not sure I'm going… to get that much better." (P5)

Having more accurate expectations of recovery alleviated some distress, again pointing to the importance of reliable information provision.

"I think I feel… a little bit reassured... So I think I've had assurance, that I am on track… that 6 months to get better is perfectly acceptable and perfectly normal and, you know, don't worry type of thing." (P3)

Interestingly, some participants referred to positive gains following mTBI, such as the new appreciation for a calm life. Such a consideration might offer an element of solace to those early on in recovery.

"It's about giving your body the time to recover, you know, and not expecting too much from it and taking for granted everything that you've had over the last 10-15 working years… it sort of helped me calm down a little bit…" (P1)

Symptom Management

Unhelpful strategies. Almost all participants reported initially managing symptoms in an unhelpful way, by "pushing it" or changing irrelevant factors. They reported this was due to expectations of natural recovery and poor understanding of symptoms.

"I just hoped it would gradually go away if I pushed myself a bit." (P4)

"I went back to work when I shouldn't have done. I didn't know how to take rest breaks, I tried to carry on, I did all those sorts of things." (P2)

"You change your diet, you change your sleeping pattern, you try to do everything that you think is right but sometimes it's not the right thing." (P1)

Participants remarked that the MHIC had drawn their attention to their errors in symptom management by explaining what one should be doing, or explaining why 'pushing it' was not helpful.

"I mean that was the first time I was told, basically what I have been doing, I shouldn't have been." (P6)

Guilt. Participants indicated that guilt about allowing themselves time to recover had impacted symptom management. They note the reassurance and normalising from the clinic helped reduce this and allowed them to recover appropriately.

"I would have felt guilty if I hadn't have been told by her, 'No, what you got to do is not feel guilty about it. Get up when your body tells you to get up'." (P6)

"[Clinician] spent a lot of time talking about that type of situation where it's okay for you to feel like you might want to nap in midday or whatever" (P5)

Confidence in management. Several participants felt the main effect of the MHIC was improved confidence in managing symptoms via trusted advice and more realistic expectations.

"You get back a bit of control with what you can do." (P6)

"To be told this is what you're suffering with, these are the things you can do …. It's a big "phew, yeah okay I'm not abnormal here" this is just something I've suffered and it's going to be very short-term." (P1)

Service evaluation

Person centred. The strongest sub-theme of service evaluation was an appreciation of the clinic's person-centred approach. Participants described the practitioners as "*caring*", putting them at "*ease*" and being someone who "*listened*".

"I didn't feel like I was… being put under a medical microscope. It was an interaction, a human interaction. It was quite important it was like a personal interface." (P6)

"I did feel she was really concentrating on me for about an hour, I was surprised how long the sessions were and how carefully she was going through and listening to what I'm saying." (P5)

Some participants noted that practitioners developed recovery plans with their lifestyles in mind and made sure they were not too restrictive. The professionalism of the team was praised.

"It was never… drummed into me "you've got to do this, you've got to do that", and when I was explaining to [practitioner], it was never frowned upon when I couldn't meet some of the goals that were set." (P6)

One participant reported that the MHIC provided *"the most thoughtful care that I have come across in the NHS for years."* (P2).

Service met needs. There was a general appreciation of the service and the sense that needs had been met. The importance of having the MHIC to guide recovery was discussed.

"… You can't believe how comforting the whole thing has been… I was feeling quite different and, no I'm much more sure of myself…" (P4)

The input from MHIC was deemed particularly important, in light of the lack of information available elsewhere:

"You can only think to those couple of weeks where I wasn't in touch with anybody… just the not knowing… it does make you wonder if I hadn't done X, Y and Z would I be here now?" (P1)

When asked if improvements could be made, several participants responded that they would not change anything and all indicated that they were satisfied with the service received.

"…it was as near perfect as." (P4)

Referral to service. Experiences accessing the service were mixed; some participants found referral timely and appropriate, others noted delays in referral or having to discover the service themselves.

[In reference to referral] "It has happened! It just happened I didn't do anything towards that." (P5)

"So, once we knew what to do it was brilliant, the problem was no one else in the health service knows about the clinic...." (P2)

All participants agreed that early referral is ideal due to the importance of receiving the correct information to tailor treatment and influence recovery.

"For someone having a head injury for the first time... they probably don't understand what the hell is going on. The earlier you can understand what is happening, the better." (P3)

"Whether or not I would have benefited with it earlier, perhaps that is my only personal wish, but it's no fault of the clinic." (P6)

Study 3

Method

Design. Within-groups analysis of completed routine outcome measures.

Participants. All routine outcome measures completed in 2016 were collected (*n* = 23). Results were excluded if outcome measures were recorded at one time point (*n* = 6). The total number of participants was 17.

Materials. The Rivermead Post-Concussion Symptom Questionnaire (RPQ; King, Crawford, Wenden, Moss, & Wade, 1995) is a validated measure of symptom experiences associated with PCS. The total score indicates PCS severity. While some research questions the uni-factor nature of the measure, findings indicate good test-retest reliability and adequate construct validity (Barker-Collo et al., 2016; Eyres, Carey, Gilworth, Neumann, & Tennant, 2005).

Procedure. Routine outcome measures are given to patients at each MHIC appointment. Scores on the RPQ from the first and final MHIC appointments for each patient were compared.

Results

Difference in scores were computed and outcomes did not significantly deviate from normality D(17) = .117, $p > .05$. There were no outliers.

A paired-samples t-test was conducted to compare RPQ score before and after MHIC attendance. RPQ scores at time 1 (M = 32.8, SD = 15.4) were higher than time 2 (M = 26.9, SD = 17.4), with a small to moderate effect size (d = .36), however this was not significant; $t(16)=1.594$, p = 0.131 (Figure 2.1).

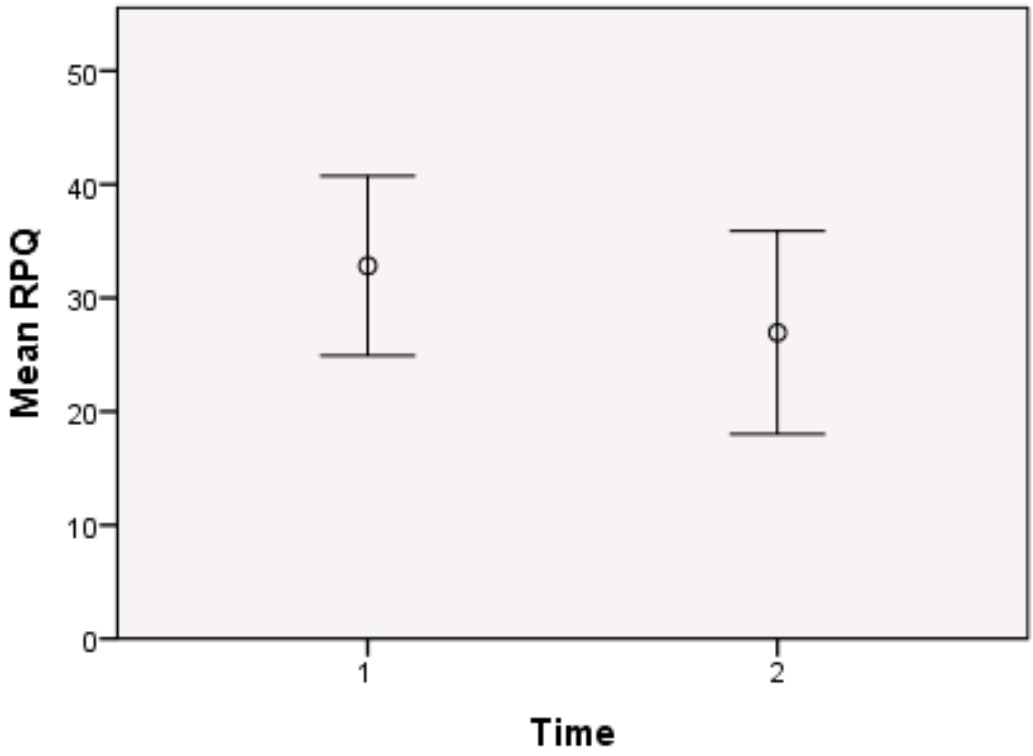

Figure 2.1. Error bar indicating mean RPQ score and 95% confidence intervals at time points 1 and 2.

Discussion

Findings indicate that the MHIC has been meeting patient needs by providing accurate, accessible psychoeducation and intervention ideas. This enabled patients to understand their symptoms, feel reassured and experience a sense of control over recovery. Accordingly, many patients felt the MHIC positively influenced recovery.

Study 1

The case-note audit indicated the MHIC regularly adhered to some guidelines but neglected others. For instance, the service consistently assessed headache, fatigue and sleep and provided partial psychoeducation and fatigue management plans. However, mental health assessment appeared lacking and interventions for cognitive difficulties and return-to-work were not often recorded.

With only moderate levels of inter-rater reliability, conclusions must be cautious. Since the coding instrument and instructions were reviewed with the second-rater following a pilot, the difference between ratings probably indicates different interpretations of case notes.

Study 2

Overall, outcomes suggest the service is meeting patients' perceived needs. Outcomes can be considered across four themes: the *importance of trusted information*, initial *perceptions of injury and recovery*, their impact upon *symptom management*, and a *service evaluation*. Patients described the onset of maladaptive management strategies following poor initial understanding of symptoms. Information from the MHIC improved symptom understanding, engendered hope in treatment and provided helpful strategies. The MHIC was often identified as the only source of trusted information that fit with individuals' experiences. These findings echo research which suggests general knowledge of TBI is poor and internet resources can be confusing and inaccessible (Block et al., 2016).

Findings support theory that illness perceptions and biases affect mTBI experience and management, influencing development of PCS (Hou et al., 2012; Potter & Brown, 2012). When symptoms were unexplainable, patients did not appreciate their significance and attempted to 'carry on' and push themselves. This was often associated with feelings of worry and distress when symptoms did not resolve, leading to beliefs that aetiology was more sinister. Understanding PCS helped develop accurate expectations of recovery and initiate good coping strategies, in line with Mishel's (1988) model of Uncertainty in Illness. This reflects previous studies which suggested confusion and poor understanding can hinder recovery, whilst credible information and validation is supportive (Brunger et al., 2014; Snell et al., 2017).

This is an important consideration since anxiety responses may perpetuate PCS (Scheenen et al., 2017; Silverberg et al., 2015). Whilst a health-focussed anxiety formulation might not emphasise the importance of providing information as 'reassurance', offering assurance about the real physical symptoms present following mTBI could prevent health-focussed anxiety and maladaptive coping mechanisms developing (Salkovskis & Warwick, 1986). Timely treatment in the MHIC may support this and is reflected by the two participants whose pre-existing knowledge of PCS symptoms was critical for recovery.

Some participants found the information provided by the MHIC disorganised and lacking in some areas, suggesting more coherent information might aid understanding. Furthermore, participants noted that some primary health services were not aware of the MHIC, which led to referral delays.

The existence of PCS is often contested in the literature, however this study demonstrates the reality of PCS symptoms and impact on wellbeing. The greatest need from participants appeared to be reliable, trustworthy and timely information and assurance, supporting symptom understanding. This biopsychosocial approach led to important changes in perceptions of illness and symptoms, a process associated with recovery in other conditions of persistent physical symptoms (Marks et al., 2016). This should be considered important, regardless of contentions surrounding aetiology and presentation of PCS.

Study 3

Results indicate mTBI symptom severity reduced following MHIC attendance, but were not significant. This may be a Type II error due to low power. Outcome measures should continue to be collected and audited regularly.

Service Recommendations

The following recommendations were made to the service:

- The service should continue to use ONF guidelines (2013). Use of a checklist may act as an aide memoire and help practitioners easily record guideline concordance (Francke et al., 2008). A checklist incorporating ONF guidelines has been created in collaboration with one practitioner (AT) (see Appendix B6). A pilot is recommended to evaluate usability.
- Psychoeducation supports provision of trustworthy information that fits with experience. Printed resources should be used to standardise this. These can be adapted from those supplied by the ONF.
- Medical services should be encouraged to refer into the service. Further research may consider barriers to referral. An information booklet may be developed to provide information to patients and practitioners.
- Outcome measures should be used consistently and audited at regular intervals.

Limitations

This study is unique in exploring patient perceptions of a civilian MHIC in the UK. There are limitations to the project. Although criterion-based audit is an efficient and standardised method of linking audit with clinical guidelines (Hutchinson et al., 2010; Shaw, 1990), it can only assess what is recorded. Furthermore, inter-rater reliability was moderate so outcomes should be interpreted with caution. The case

note audit could be repeated once the checklist becomes embedded in the service, as this may improve accuracy in clinical notes.

Although qualitative interviews were important to explore patient experience, the results are limited in generalisability. The project describes one mTBI service within one locality in the UK; practices may differ and experiences may not be applicable to other individuals. Interpretation may have been biased by the analyser's pre-existing experience of psychology supporting TBI recovery. Efforts to reduce this included employing a second reviewer and peer discussion.

Future research should use quantitative methods to explore the experience of illness uncertainty and health-focused anxiety further. Similar research may benefit from greater number of outcome measures and the exploration of mediating factors, including time elapsed between injury and diagnosis.

Summary

Overall, providing the correct information in a timely and sensitive manner helped reduce uncertainty in participants and supported greater confidence in symptom management. It is noted that everybody attributed his or her recovery so far to the treatment from the MHIC. This might indicate that the service is meeting patient needs when timely referral is achieved. Unfortunately, participants suggested the service was not well known by other medical practitioners. It remains to be seen whether recovery would have been more successful if MHIC intervention occurred earlier, however findings in this study point to the need to review barriers to referral in the local context.

Lay Summary

Mild Traumatic Brain Injury (often known as mTBI or concussion) occurs when an injury to the brain causes loss of consciousness or confusion/disorientation for thirty minutes or less. For some people this can cause cognitive difficulties for a prolonged period of time, such as poor attention, headaches, fatigue, or changes in mood. This can have an impact on people's daily function, such as their relationships and ability to work.

Research indicates that these prolonged symptoms are often caused by the way people think and feel about their injury. If somebody is worried about the injury and/or symptoms, or feels like they don't have a lot of control over them, this can make it worse. Accordingly, psychological services have been set up to help people manage their response to symptoms, often by giving them correct information about mTBI symptoms and ideas about how to manage them. However, some research would say that information giving can promote 'reassurance-seeking', where people repeatedly ask for the reassurance of others. Very few mTBI services have been evaluated and it is not known whether information giving is meeting the needs of service users.

This study evaluated one such service, first by analysing past service user notes to see how well it keeps to recommended guidelines. Secondly, past service users were interviewed to identify whether the service met their needs. Thirdly, scores on questionnaires about symptom frequency from before and after clinic attendance were compared.

The service is meeting some guidelines regularly, particularly those around assessment of headache, fatigue and sleep, provision of education about symptoms and treatment of fatigue. The service did not always adhere to guidelines regarding assessment of mental health, treatment of cognitive difficulties and helping people return to work. However, the method of analysing case notes can only assess what was recorded in service user notes; without observing appointments, one can not be certain which guidelines are actually being met.

Interviews suggested that service users' needs were being met. Service users reported that they often did not understand what was happening to them after their injury, as they did not know much about mTBI. This meant they started using unhelpful strategies, such as "pushing it" and trying to get back to normal. Many of the service users found that the clinic was the only place they could get information

about mTBI and the associated symptoms, helping them understand what was happening and devise ways of managing it. Without this, some service users thought they would not have been able to improve as they had. Accordingly, most people reported that they would have liked to have been referred to the service earlier, as their experience was not always straight forward.

Finally, questionnaire data showed that symptoms became less frequent after attending the clinic. However, the change was small and could be down to chance. To explore this further, the study would need to analyse more service user questionnaires.

In summary, the service appears to be meeting service user needs by providing the right information in a manner that supports the development of helpful coping strategies. Information giving did not seem to cause 'reassurance-seeking' in this sample of people. However, the service did not appear to meet all the guidelines and more questionnaire responses are required to determine whether or not the service truly reduced number of symptoms. Accordingly, some recommendations were made to the team to improve this:

- A checklist may help practitioners easily record which guidelines were met in session. A potential checklist has been created in collaboration with one practitioner. A pilot is recommended to evaluate usability.
- Having information about mTBI was important. Printed leaflets should be used to provide the same information to everybody.
- Further research may consider how to help people refer into the service. An information booklet may be developed to help provide information to patients and practitioners in GP surgeries, or those looking for mTBI information online.
- Service user questionnaires should be used regularly

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What Others Think: The Impact of Meta-Stereotypes on Self-Disclosure of Mental Health Diagnoses

Main Research Project

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This journal was chosen given the relevance of the experiment to social psychology within clinical psychology. As the content did not focus on the effects of social psychological concepts on psychopathology, it is less relevant to journals focussing on clinical psychology (see Appendix C1 for Author Guidelines).

Literature review

Mental health stigma reflects the perception of mental illness as a socially unacceptable attribute (Link & Phelan, 2001). The present paper explores the impact of stigma on self-disclosure of mental health issues. Evidence regarding the effect of mental health stigma on wellbeing and disclosure will first be reviewed together with interventions focussed on supporting individuals to make decisions about disclosure.

An element of stigma that may cause discomfort with disclosure is *symbolic-interaction stigma* (SIS; Link, Wells, Phelan, & Yang, 2015), or the imagined responses to disclosure and anticipated discrimination. The current study suggests that stereotypes one believes others' hold about them, known as meta-stereotypes (Vorauer, Main, & O'Connell, 1998), are a form of symbolic-interaction stigma and elicit fears of rejection, interfering with disclosure comfort. The study explores whether mental health meta-stereotypes exist and how they impact comfort with disclosure and self-esteem to understand whether they offer a target for interventions supporting strategic disclosure.

Social Identity Theory (SIT) suggests one's self-concept is positively correlated with in-group perceptions (Tajfel & Turner, 2004). Accordingly, humans are motivated to perceive their in-group positively to maintain self-esteem. However, stigma can cause internalisation of negative in-group perceptions, reducing self-esteem (Branscombe, 1998). In terms of mental health, this process has been labelled self-stigma and is linked with reduced self-esteem, in line with SIT's assumptions (Corrigan, Kerr, & Knudsen, 2005; Corrigan, Watson, & Barr, 2006). Furthermore, self-stigma has been associated with reduced hope, empowerment, quality of life and social support (Livingston & Boyd, 2010) and can have a negative influence upon recovery (Oexle et al., 2017).

People with mental health problems may manage negative in-group perceptions by avoiding self-disclosure, effectively 'leaving' the group (Ellemers, Knippenberg, & Wilke, 1990), with some research identifying rates of non-disclosure as high as 73% (Ilic et al., 2012; Isaksson et al., 2017). However, this can create increased self-monitoring (Beals, Peplau, & Gable, 2009) and has a negative impact on mental health via avoidance of opportunities for positive contact or social support (Abiri, Oakley, Hitchcock, & Hall, 2016; Ilic et al., 2012). This might be exacerbated as the individual's identity remains linked to the group despite having left 'socially'.

Corrigan et al (2015) developed an intervention to empower individuals to strategically self-disclose, reducing the need for self-monitoring and increasing access to social support (Beals et al., 2009). Such interventions aim to reduce self-stigma, however a recent review reported inconsistent outcomes from disclosure-based interventions and suggests psychoeducation may be the only effective intervention (Tsang et al., 2016). By contrast, others argue that psychoeducation has long-term limitations by placing the problem on the person, rather than society (Corrigan, 2016). Accordingly, whilst disclosure-based interventions have the potential to be effective, they require improvements.

Researchers have since considered factors that influence likelihood of disclosure, such as forecasted stigmatising interactions. These imagined experiences (Symbolic Interaction Stigma; SIS) include perceptions of societal-level devaluation, anticipation of being stereotyped, and expectations of rejection and/or discrimination (Link et al., 2015). Although in early stages of research, SIS may be more common than self-stigma and could predict withdrawal, reduced self-esteem and isolation (Link et al., 2015). Indeed, anticipating rejection can mediate the link between stigma and low self-esteem (Blodorn, Major, Hunger, & Miller, 2016). Furthermore, SIS can create more disclosure-related distress than actual experiences of past discrimination (Rüsch, Brohan, Gabbidon, Thornicroft, & Clement, 2014) and is linked with non-disclosure (Isaksson et al., 2017). This might be explained by the finding that mere awareness of stigma can impact in-group perceptions, eliciting social identity threat and expectations of negative judgement or rejection (Steele, Spencer, & Aronson, 2002). Therefore, forecasted negative experiences may impact willingness to self-disclose and may be a missing target of interventions designed to improve wellbeing by promoting disclosure.

Of those forecasted experiences, stigma consciousness, or the expectation of being stereotyped and treated according to stereotypes (Pinel, 1999), is of particular interest to this paper. One process influencing stigma consciousness may be meta-stereotype elicitation, or the way one believes members of the outgroup stereotype the in-group (Vorauer et al., 1998). For example, a female may hold the meta-stereotype that males believe she is “gossipy” because she is female (Owuamalam & Zagefka, 2011). Meta-stereotypes are inherently inter-relational and typically activated when anticipating social evaluation (Gordijn, 2010; Vorauer, Hunter, Main, & Roy, 2000) therefore, are likely to be elicited when considering disclosure. However, given the mistrust commonly experienced between groups, meta-stereotypes are typically negatively valanced (Frey & Tropp, 2006).

Meta-stereotypes may have a direct impact on self-esteem by devaluing the in-group and threatening social identity, with a particularly strong effect for those dissatisfied with group membership (Gordijn, 2010; Owuamalam & Zagefka, 2011; Vorauer et al., 1998). Furthermore, meta-stereotypes may increase intergroup anxiety (Finchilescu, 2010) and activate avoidance behaviours to protect the self-view, such as avoiding contact with potentially stereotyping outgroups. Accordingly, mental health meta-stereotypes may result in avoidance of self-disclosure and reduced opportunities for positive intergroup contact (Beals et al., 2009; Stephan & Stephan, 1985). As self-disclosure and intergroup interactions have been identified as targets for self-stigma interventions (Corrigan, 2016), meta-stereotypes may offer means for intervention. Furthermore, meta-stereotypes may affect self-esteem, either directly or via expectations of rejection, although research for this is currently limited. In either case, it would seem important to address issues of meta-stereotypes alongside self-stigma in interventions promoting strategic disclosure. This study will explore these hypotheses in more detail (see Figure 3.1).

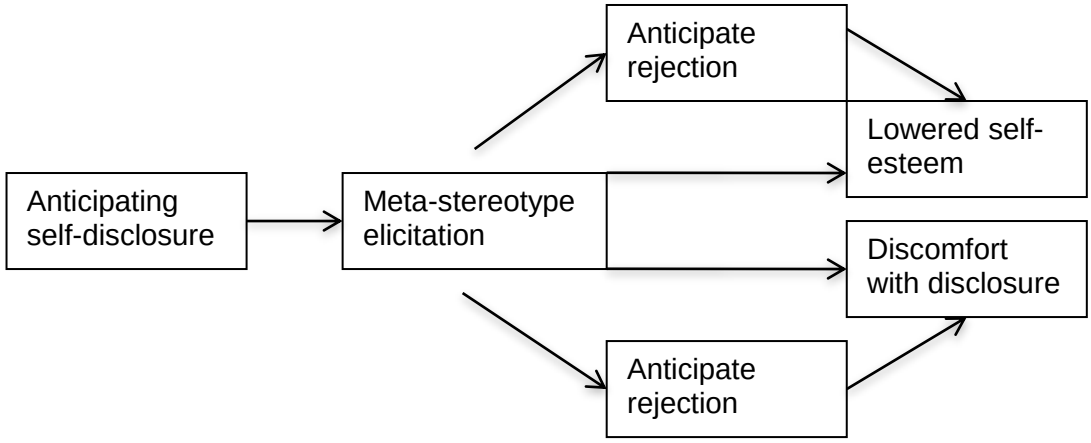

Figure 3.1. Conceptual diagram of hypotheses explored.

To our knowledge, no studies have explored mental health meta-stereotypes or their impact upon disclosure. Study 1 describes the development of a meta-stereotype measurement tool specific to mental health, based on methods by Gordijn (2010). Study 2 employs the measure to explore the proposed model by considering how anticipating self-disclosure to a person with positive versus negative perceptions of mental health impacts meta-stereotype elicitation, rejection-expectation and self-esteem. The hypotheses are as follows:

1. Meta-stereotypes will be elicited when imagining self-disclosure. Imagining disclosing to someone with negative attitudes towards mental health will lead to greater elicitation of meta-stereotypes compared to imagining disclosing to someone with positive attitudes.
2. Meta-stereotype elicitation will increase rejection-expectation.
3. Meta-stereotype elicitation will reduce comfort with disclosure.
4. Meta-stereotype elicitation will reduce self-esteem.
5. The effect of meta-stereotype elicitation on (a) comfort with disclosure and (b) self-esteem will be mediated by rejection-expectation.

Study 1: Questionnaire construction

Governance and Ethical Considerations

Ethical approval was received from University of Bath Psychology Ethics Committee (ref: 16-231) (see Appendix C2).

Stage one

Method.

***Design*.** A structured interview design was employed to identify meta-stereotypes in people with a current mental health diagnosis. In line with previous research (Angermeyer & Dietrich, 2006), stereotypes about depression and psychosis were sought to explore changes in mood and unusual thoughts and be relevant to various mental health experiences.

***Participants*.** Participants were recruited via social media and a network of volunteers with experience of mental health problems. Inclusion criteria were: personal report of having a mental health diagnosis, being over the age of 18 and living in the UK. Exclusion criteria was being currently very unwell, as assessed by participant's self-report.

Twenty-one participants were recruited. Five were excluded for being currently very unwell (n = 2), not providing contact details (n = 2) or not providing full consent (n = 1). Five were lost to attrition. Eleven participants completed the interview (81% female) and self-reported diagnoses included: depression (n = 8), anorexia (n = 4), anxiety (n = 3), psychosis (n = 3), personality disorder (n = 2) and

obsessive compulsive disorder (*n* = 1). Note that some participants reported co-morbid diagnoses.

***Procedure*.** Participants were provided an information sheet and consent forms (Appendix C3). The interview schedule consisted of questions about mental health meta-stereotypes and other meta-stereotypes (unrelated to mental health) that participants believed applied to them. As fewer people had experience of psychosis, a specific question about expected psychosis stereotypes was added. Verbatim responses were noted and checked-back with participants. Participants were debriefed (Appendix C3) and had the opportunity to ask questions. Verbatim-responses were analysed (see Appendix C4 for details).

Results. Overall, eight participants provided meta-stereotypes for depression and eleven participants provided meta-stereotypes for psychosis. Results are presented in Table 3.1 and indicate the 5 most frequently endorsed meta-stereotypes for psychosis were: crazy, dangerous, strange, always affected and unpredictable. For depression, outcomes were: over-reacting, need to cheer up, using depression as an excuse, malingering and weak. Due to the large number of stereotypes in sixth place, the most unique responses were selected for online validation.

Stage two

Method.

Design. Outcomes from Stage 1 were validated quantitatively using a questionnaire design.

Participants. A community-based sample was recruited online via participant recruitment sites, social media and discussion forums, including Reddit, Facebook, and LinkedIn. A community sample was recruited as stereotype knowledge may be formed regardless of mental health experience. Therefore, those without mental health diagnoses should have similar knowledge of meta-stereotypes. Inclusion criteria were: being over the age of 18 and being a UK resident. Participants were excluded if they were currently very unwell with a mental health problem.

In total, 161 people were recruited. Twenty-eight people were excluded as they defined themselves as very unwell (*n* = 19), not current UK residents (*n* = 7), or under the age of 18 (*n* = 2). The final sample was 133 (58.1% females; mean age

31.7, SD = 11.4). Half of participants defined themselves as a person with a mental health diagnosis (51.2%).

Procedure. Participants were asked to imagine themselves as having a diagnosis of psychosis. Participants rated the strength of each meta-stereotype's elicitation on a 9-point Likert scale. This was repeated for the depression diagnosis before a debrief was provided (see Appendix C5 for online questionnaire). Mean analysis was conducted to identify the final questionnaire items and ensure their difference from irrelevant stereotypes. Mean analysis was used to identify differences in responses between those who self-defined as having a mental health diagnosis or not (see Appendix C4 for further details).

Results. Mean analysis confirmed the top five psychosis and four of the top depression meta-stereotypes (Table 3.1). One depression item was more highly endorsed than in Stage one. Wilcoxon Signed-Ranks Test indicated participants scored meta-stereotypes higher than irrelevant stereotypes for psychosis (Meta-stereotypes: median = 7.6, range = 1.8 – 9; Irrelevant stereotypes: median = 3, range = .8 – 5.6; z = .00, $p < .001$) and depression responses (Meta-stereotypes: median = 7, range = 1 – 9; Irrelevant stereotypes: median = 2.2, range = .8 – 5; z = 8909, $p < .001$). Professionals in the field were consulted and the top five most relevant meta-stereotypes for psychosis and depression were included in the final questionnaire. Cronbach's alpha was good for final psychosis and depression meta-stereotypes (a = .871 and .88, respectively). Responses did not significantly differ when participants were grouped according to mental health experience (Psychosis: u = 2081.5, $p = .56$; Depression: u = 1792, $p = .06$). The mean score for the full questionnaire was 7.01 (SD = 1.21) and Cronbach's alpha was .87 (see C6 for final questionnaire). The predictive validity of this tool will be explored further in Study 2.

Table 3.1.
Table Describing Meta-Stereotypes Identified Through Interviews and Means of Community Sample Validation

Psychosis Meta-stereotypes	**Endorsements** *n* = 11	**Community mean (SD)** *n* = 133
Crazy	13	7.72 (1.68)
Dangerous	12	7.09 (1.41)
Strange	7	7.73 (1.66)
Always be affected	7	6.56 (1.9)
Unpredictable	5	7.89 (1.306)
Unable to function	2	6.37 (1.84)
Attention-seeking	2	
Should be locked up	2	
Drug user	2	5.05 (2.0)
Lack empathy	2	
Selfish	1	
Unreliable	1	
Solitary	1	
Contagious	1	
Stand offish	1	
Others won't understand me	1	
Malingering	1	
Depression meta-stereotypes	**Endorsements** *n* = 8	**Community mean (SD)** *n* = 133
Over-reacting	5	6.55 (2.08)
Need to cheer-up	4	7.46 (1.79)
Using it as an excuse	3	6.87 (1.88)
Malingering	2	6.60 (1.95)
Weak	2	6.68 (1.95)
Sad all the time	1	7.76 (1.657)
Unreliable	1	
Attention seeking	1	6.6 (2.0)

Note. Number of endorsements refers to the number of interview outcomes that fit with the meta-stereotype theme; Community mean refers to online validation

Study 2: The effects of meta-stereotype elicitation on disclosure

Method

Governance and Ethical Considerations. Ethical approval was received from HRA (IRAS: 212897), Research and Development offices at NHS Trusts, and the University Psychology Ethics Committee (16-231) (Appendix C7).

Design. A between-groups experimental design was employed to explore how attitude valance of others (i.e. positive vs. negative) affects meta-stereotype elicitation, self-esteem, rejection-expectation, and disclosure comfort.

Participants. Seventy-two adults were recruited via care co-coordinators in seven secondary mental health teams across South West England and through advertisements at mental health support groups, online research recruitment services and on a University Campus. Inclusion criteria were: self identifying as a person with a mental health diagnosis and being over the age of 18. Exclusion criteria were: having a history of developmental disorders or organic impairment, poor grasp of English language or inability to consent. Inclusion criteria were checked with participants and care co-coordinators when recruited via the NHS. No individuals withdrew from the study.

Measures. In terms of control variables, wellbeing was measured using the Clinical Outcomes in Routine Evaluation – Outcome Measure (CORE-OM; Evans et al., 2002) and ingroup identification was measured using the 'centrality' subscale of Leach et al's (2008) multicomponent model of in-group identification. With regards dependent variables, meta-stereotype elicitation was measured using the questionnaire developed in Study 1, rejection-expectation was measured using a tool designed by Blodorn et al (2016), self esteem was measured using the State Self-Esteem Scale (Heatherton & Polivy, 1991) and comfort with disclosure was measured using a single item measure from Rusch et al (2011). For further details, see Appendix C8.

Procedure. Participants were provided an information sheet before meeting with the researcher at their home or university lab, based upon risk considerations and participant preference. Upon arrival, participants had the opportunity to ask questions and signed a consent form. Participants completed wellbeing and in-group identification measures prior to experimental manipulation.

Participants were allocated to the positive or negative condition alternately, and were asked to think about a person they knew with either positive or negative attitudes towards mental health, respectively. Participants were provided the following instruction:

> *"Think of somebody you would like to tell your mental health diagnosis to who you think might have a [positive attitude (positive condition)] / [negative attitude (negative condition)] towards mental health. You should not have told this person already."*

Vignettes were provided for individuals who could not think of a specific person (Appendix C9). All participants rated the valance of the imagined person's

attitudes on a scale ranging from -5 (very negative) to +5 (very positive) to check the manipulation succeeded. If the score fell below 2 or was in the wrong direction, participants were asked to think of someone with stronger attitudes. Five participants' scores initially fell below 2 but all participants had a final score of 2 or above. Participants were asked to describe the individual anonymously to the experimenter and imagine the disclosure scenario. Prompts were used to elicit more detail (e.g. What are you doing? What is going through your mind?).

Following the manipulation, participants completed measures of meta-stereotype elicitation, rejection-expectation, comfort with disclosure and state self-esteem. Demographic information was recorded and participants were debriefed and checked for distress. A brief mindfulness-based exercise was offered to end the session, based on participant's personal preference. See Appendix C10 for questionnaire pack.

Quantitative analysis. A lack of comparable studies means it is difficult to predict effect sizes. An a priori power analysis was conducted using G*Power software (Faul, Erdfelder, Buchner, & Lang, 2009) based on assumptions that a moderate effect might be found (d = .05). A sample of 132 participants was suggested to achieve power of .80 with statistical significance of 0.05.

Data analysis was planned a priori. Data was handled using IBM SPSS (Version 24) and analysed to check parametric assumptions. Mean analysis between groups was conducted, with condition as independent variable. As secondary analysis, hierarchical multiple regressions were conducted with comfort with disclosure and SSE as dependent variables. Control variables were entered at Step 1, meta-stereotype elicitation at Step 2, and rejection-expectation at Step 3. Multicollinearity was assessed by checking the Variance Inflation Factor was below 10 and tolerance statistic above .2 (Bowerman & O'Connell, 1990; Myers, 1990).

Mediational analysis was conducted using the PROCESS (Model 4) command (A. F. Hayes, 2013) to identify direct and indirect effects between variables. The IV was meta-stereotype elicitation, the mediator rejection-expectation, and DVs comfort with disclosure or SSE. The model used linear regression analysis to identify direct relationships and bootstrapping to 1000 resamples with bias-corrected confidence estimates to identify indirect effects (A. F. Hayes, 2013).

Results

Demographic details are summarised in Table 3.2. T-tests indicate groups did not significantly differ on age, in-group identification or wellbeing (p >.05) and chi-square analysis indicates groups did not differ in terms of gender, education (university vs. non-university), or ethnicity (White British vs. non White British). T-tests indicate dependent variables did not significantly differ between genders, recruitment type, ethnicity or education (p > .05).

Table 3.2.
Demographic Details of Participants in Study 2.

Variables	**Positive condition** (n = 36)		**Negative Condition** (n = 36)		**Total** (N = 72)		***t***	***p***
	M	SD	M	SD	M	SD		
Age	33.9	12.8	33.3	13.4	33.6	13.1	613.5	.70
In-group Identification	8.9	3.2	9.6	3	9.3	3.1	741.5	.29
CORE-OM	13.5	7.8	14.5	7.2	14	7.5	698	.57
	N	%	N	%	N	%	$\chi 2$	*p*
Gender							2.90	.09
Male	10	27.8	17	47.2	27	37.5		
Female	26	72.2	19	52.8	45	62.5		
Ethnicity							.40[a]	.53
White British	32	88.9	28	77.8	60	83.3		
White other	1	2.8	4	11.1	5	6.9		
Asian	1	2.8	3	8.3	4	5.6		
Black British	2	5.6	0	0	2	2.8		
Black other	0	0	1	2.8	1	1.4		
Education							.51[b]	.46
None	1	2.8	2	5.6	3	4.2		
Compulsory	7	19.4	3	8.3	10	13.9		
Further Education	12	33.3	16	44.4	28	38.9		
Undergraduate	11	30.6	12	33.3	23	31.9		
Postgraduate	5	13.9	3	8.3	8	11.1		
Recruitment							1.40	.24
NHS	22	61.1	17	47.2	39	54.2		
Community	14	38.9	19	52.8	33	45.8		
Diagnosis								
Psychosis	13	36	10	27.8	23	31.9		
Depression	10	27.8	6	16.7	16	22.2		
Anxiety	2	5.6	8	22.2	10	13.9		
Depression/Anxiety	2	5.6	4	11.1	6	8.3		
BPD	4	11.1	5	13.9	9	12.5		
Eating Disorder	1	2.8	3	8.3	4	5.6		
PTSD	2	5.6	0	0	2	2.8		
Bipolar Disorder	2	5.6	0	0	2	2.8		

Note. M = Mean; SD = Standard Deviation; CORE-OM = Clinical Outcomes in Routine Evaluation – Outcome Measure; BPD = Borderline Personality Disorder; PTSD = Post-Traumatic Stress Disorder. [a] Refers to difference between people with non-university and university education; [b] Refers to difference between people of White British and non-White British ethnicity

To check for assumptions of normality, data was split according to condition and histograms were inspected; data appeared normally distributed. Estimates of skew and kurtosis were divided by their respective standard errors to identify z-scores, which indicated positive skew in measures of meta-stereotypes elicitation and rejection expectation for the positive condition and positive skew for comfort with disclosure in the negative condition. Box plots were inspected and no significant outliers were identified. Levene's test indicated poor homogeneity of variance in measures of meta-stereotypes, rejection-expectation and comfort with disclosure ($p < .05$). As some data did not meet parametric assumptions and the final sample could not reach 0.8 power, parametric tests were corroborated with non-parametric tests or robust methods.

Analysis of group means are presented in Table 3.3. Hypotheses suggested meta-stereotype elicitation would be higher in the negative condition than the positive, and this is supported (t (55.32) = 10.74, $p < .001$, d = 2.54). Meta-stereotype elicitation was hypothesised to increase rejection-expectation and decrease comfort with disclosure and self-esteem. Given the strong effect of condition on meta-stereotype elicitation, this might be inferred from mean analysis. Independent t-test indicates the hypothesis is supported significantly for rejection-expectation (t (61.84) = 5.98, $p < .001$, d = 1.41) and comfort with disclosure (t (65.15) = 5.32, $p < .001$, d = 1.25). However, mean scores suggest comfort with disclosure is neutral at best and non-significant correlations indicate this is independent of wellbeing (r = -.18, $p > .05$) and in-group identification (r = -.04, $p > .05$). Finally, in contrast to hypotheses, an independent t-test suggests SSE did not

Table 3.3.
Table describing difference in outcome variables according to condition

Variable	Positive		Negative		CI	*t*	*p*
	Mean (SD)	Median (range)	Mean (SD)	Median (range)			
Meta-stereotype elicitation	3.07 (1.60)	2.5 (1-7.9)	6.37 (.91)	6.4 (4.4-7.8)	2.68 - 3.91	10.74	<.001
Rejection-expectation	3.42 (1.48)	3.57 (1-6.63)	5.21 (1.01)	5.19 (2.5-6.88)	1.19 – 2.39	5.98	<.001
Comfort with Disclosure	4.14 (1.78)	4 (1-7)	2.17 (1.34)	2 (1-7)	1.23 – 2.71	5.32	<.001
State Self Esteem	61.44 (19.16)	62 (25-94)	58.17 (18.02)	58.5 (28-87)	-.67 – 6.47	.748	.457

Note. SD = Standard Deviation, CI = Confidence Intervals

significantly differ between conditions (t (70) = .748, p = .457). Outcomes from Mann-Whitney U tests confirmed findings. Correlational analysis confirmed the relationship between meta-stereotype elicitation and rejection-expectation (r = .77, p < .001), comfort with disclosure (r = -.62, p < .001) and SSE (r = -.31, p = .009). Spearman's Rho statistics were similar.

The final hypothesis suggested rejection-expectation might mediate the relationship between meta-stereotype elicitation and (a) comfort with disclosure, and (b) SSE. Hierarchical multiple regressions were conducted to understand the different relationships between meta-stereotype elicitation, rejection-expectation, comfort with disclosure and SSE (see Tables 3.4 and 3.5). As non-parametric tests are not available for regression, bootstrapping to 1000 resamples was applied to improve normal distribution. When comfort with disclosure is input as the dependent variable, only meta-stereotype elicitation has a significant relationship (β = -.416, t = -2.78, p = .007). This accounted for 36.4% of variance. The addition of rejection-expectation as a predictor improves prediction by 3% and approaches significance (β = -.29, t = -1.88, p = .064), however becomes non-significant following bootstrapping (p = .160).

When SSE is the dependent variable, control variables account for 67.1% of variance (wellbeing: β = -.65, t = -8.57, p = .001; in-group identification: β = -.231, t =

Table 3.4.
Outcomes of hierarchical regression with Comfort with Disclosure as DV

Predictors	**Models[a]**								
	Model 1			**Model 2**			**Model 3**		
	β	*t*	*p*	β	*t*	*p*	β	*t*	*p*
Block 1									
Wellbeing	-.192	-1.53	.131	-.058	-.57	.571	.008	.074	.941
Bootstrap			*.095*			*.573*			*.936*
In-group ID	.027	.22	.830	.121	1.20	.235	.076	.748	.457
Bootstrap			*.862*			*.301*			*.489*
Block 2									
M-S				-.631	-6.41	.001	-.416	-2.78	.007
Bootstrap						*.001*			*.026*
Block 3									
Rej. Expec.							-.29	-1.88	.064
Bootstrap									*.160*
ΔR^2	3.4% (p =.30)			36.4% (p <.001)			3% (p < .001)		
Total R^2							42.8%		

Note. ID = Identification; M-S = Meta-stereotype; Rej. Expec = Rejection-expectation
[a] Multicollinearity was not a concern as variance inflation factor fell between 1.1 – 2.78 and tolerance statistic remained above 0.2

Table 3.5.
Outcomes of hierarchical regression with State Self Esteem as DV

Predictors	Models[a]								
	Model 1			Model 2			Model 3		
	β	*t*	*p*	β	*t*	*p*	β	*t*	*p*
Block 1									
Wellbeing	-.733	-10.05	.001	-.717	-9.63	.001	-.651	-8.61	.001
Bootstrap			*.001*			*.001*			*.001*
In-group ID	-.198	-2.72	.008	-.187	-2.53	.014	-.231	.-3.19	.002
Bootstrap			*.016*			*.03*			*.008*
Block 2									
M-S				-.079	-1.10	.276	.136	1.27	.208
Bootstrap						*.299*			*.168*
Block 3									
Rej. Expec.							-.290	-2.64	.010
Bootstrap									*.008*
ΔR^2	67.3% (*p* <.001)			0.6% (*p* <.001)			3% (*p* < .001)		
Total R^2							70.9%		

Note. ID = Identification; M-S = Meta-stereotype; Rej. Expec = Rejection-expectation
[a] Multicollinearity was not a concern as variance inflation factor fell between1.1 – 2.78 and tolerance statistic remained above 0.2

-3.17, *p* = .002). Meta-stereotype elicitation does not significantly relate to SSE (β = .134, *t* = 1.25, *p* = .216) and does not contribute to variance. However, rejection-expectation significantly predicts SSE (β = -.287, *t* = -2.60, *p* = .011) and accounts for 3% of variance.

Mediation Model (a) (DV = comfort with disclosure).

Mediation analysis (Figure 3.2) indicates there is a significant direct relationship between meta-stereotype elicitation and comfort with disclosure (c' path; B = -.341, *t* = -2.72, *p* = .008). There is a significant relationship between meta-stereotype elicitation and rejection-expectation (a path; B = .566, *t* = 10.00, *p* < .001) and between rejection-expectation and comfort with disclosure (b path; B = -.361, *t* = -2.119, *p* = .038). However, the indirect path between meta-stereotype elicitation and comfort with disclosure via rejection-expectation is not significant when controlling for the direct path (ab path; B -.204, CI = -.501 to .039). Therefore, the effect of meta-stereotype elicitation on comfort with disclosure is direct-only, with no mediation from rejection expectation.

Mediation Model (b) (DV = SSE). As wellbeing and in-group identification were significantly related to SSE, these were included as control variables.

Mediation analysis (Figure 3.2) indicates there is no direct significant relationship between meta-stereotype elicitation and SSE when controlling for wellbeing and in-group identification (c' path; B = 1.197, *t* = 1.273, *p* = .208). There is a significant relationship between meta-stereotype elicitation and rejection-expectation (a path; B = .547, *t* = 9.737, *p* = .001) and rejection-expectation and SSE (b path; B = -3.462, *t* = -2.638, *p* = .01). The indirect relationship between meta-stereotype elicitation and SSE via rejection-expectation is also significant (ab path, B = -1.893, CI -3.524 to -.483). The total effect of meta-stereotype elicitation on SSE remains insignificant (c path; B = -.6958, *t* = -1.098, *p* = .276), indicating an indirect-only effect.

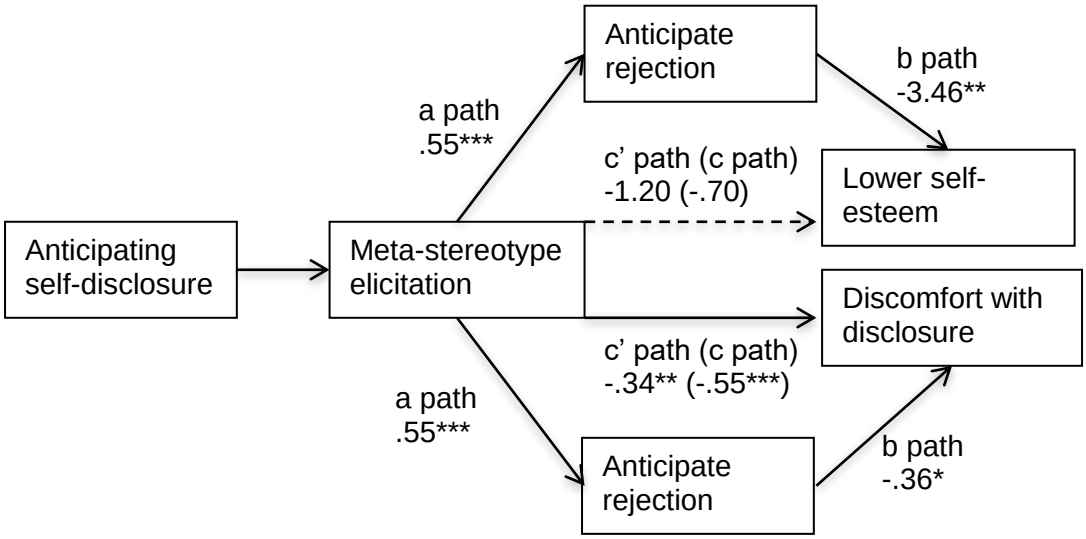

Figure 3.2. Mediation models in form of statistical diagram
Note. Solid arrows indicate significant paths, dashed arrows indicate non-significant paths
* *p* <.05, ** *p* <.01, *** *p* <.001

Discussion

Outcomes support the hypothesis that mental health meta-stereotypes are detectable using the present methodology and provides some indication about content. Secondly, meta-stereotype elicitation is greater when considering disclosing to someone with negative attitudes towards mental health compared to someone with positive attitudes. Meta-stereotype elicitation predicts variance towards comfort with disclosure over and above wellbeing, in-group identification and rejection-expectation. In contrast to hypotheses, considering disclosing to someone with negative attitudes did not have an impact on state self-esteem (SSE) compared with the positive condition. However, mediation analysis indicated an

indirect effect of meta-stereotypes on SSE, fully mediated through rejection-expectation.

It was hypothesised that mental health meta-stereotypes exist and this study identified several, including dangerousness, weakness, and malingering. Community validation using methods similar to Gordijn (2010) indicated that these are more likely to be activated in mental health populations than other stereotypes, supporting their existence. Furthermore, many of the meta-stereotypes are similar to stereotypes found in the literature (Angermeyer & Dietrich, 2006; Brockington, Hall, Levings, & Murphy, 1993; Corrigan et al., 2002), supporting construct validity and suggesting current meta-stereotypes accurately reflect social perceptions. The study introduced a tool designed to measure such meta-stereotypes, based on these findings.

Meta-stereotype elicitation was hypothesised to be greater when imagining disclosing to someone with negative attitudes towards mental health than positive, and this was supported. Given the strong effect of meta-stereotype elicitation between groups, the hypothesised relationships between meta-stereotype elicitation and rejection-expectation and comfort with disclosure can also be inferred from mean analysis. Furthermore, hierarchical multiple regression provides support that meta-stereotype elicitation remains related to comfort with disclosure after controlling for in-group identification and wellbeing. In terms of SIT, avoiding public association with the in-group may represent an identity-management strategy (Ellemers et al., 1990), which may explain discomfort with disclosure if the in-group is perceived negatively. These findings are in line with Link et al. (2015), who suggest that symbolic interaction stigma can influence disclosure-related stress and provides support for the inclusion of meta-stereotypes within this.

However, when considering disclosing to an individual with positive attitudes, comfort with disclosure was neutral at best and not linked with wellbeing or in-group identification. Therefore, other factors may influence discomfort beyond meta-stereotypes and others' perceived attitudes. Factors not included in this study are: prior experience of disclosure, self-stigma and other aspects of symbolic interaction stigma. Further qualitative exploration of the experience of disclosure may help identify factors not yet recognised in the literature.

In contrast to the fourth hypothesis, considering disclosing to somebody with negative attitudes did not have an impact on self-esteem when compared to disclosing to someone with positive attitudes. This is surprising, as SIT suggests

negative perceptions of the in-group can affect self-view, reducing self esteem in members of low-status groups (Branscombe, 1998), and meta-stereotypes have been found to affect self-esteem (Gordijn, 2010; Owuamalam & Zagefka, 2011; Vorauer et al., 1998). However, total SSE outcomes were low in this study compared with previous studies (Heatherton & Polivy, 1991) and wellbeing was strongly correlated with SSE, therefore SSE may be generally low in this population and less sensitive to change. Alternatively, as participants did not have to disclose their diagnosis, it might be that participants were able to distance themselves from the mental health identity (Ellemers et al., 1990). Furthermore, outcomes may be impacted by degree or satisfaction with in-group identification, where high-identifiers committed to improving the image of the mental health group (Owuamalam & Zagefka, 2011) or people satisfied with group membership (Gordijn, 2010) respond with coping methods that do not impact SSE. However, this was beyond the scope of the current study due to limitations in sample size.

Rejection-expectation was hypothesised to mediate the effect of meta-stereotype elicitation on (a) comfort with disclosure and (b) SSE. According to mediation analysis, whilst there is a direct effect between meta-stereotype elicitation and comfort with disclosure, this is not mediated by rejection-expectation. Therefore hypothesis 5a is not supported. It is noted that meta-stereotype elicitation was a stronger predictor of comfort with disclosure in regression analyses, so perhaps overrides the effects of rejection-expectation.

With regards hypothesis 5b, regression indicated that rejection-expectation contributes to SSE over and above wellbeing and in-group identification. There did not appear to be a total effect of meta-stereotype elicitation on SSE, however the indirect effect via rejection-expectation was significant when controlling for wellbeing and in-group identification. Similar outcomes were found when researching the effects of weight-stigma on SSE (Blodorn et al., 2016) and suggests the effect of meta-stereotypes on self-esteem is via the forecasted responses of others, in line with social identity threat (Steele et al., 2002). The current study notes the relatively large contributions of wellbeing and in-group identification that may need to be considered in future research. However, as data is cross-sectional, one can not infer causation and other relationships between variables may exist. Though supported by theory, further research using longitudinal outcomes is required to draw stronger conclusions about the effect of meta-stereotypes.

Implications for clinical practice

Outcomes indicate that meta-stereotypes are linked with comfort with disclosure over and above wellbeing or in-group identification. Accordingly, public health interventions may be important in modifying social attitudes towards mental health. One example is the Time to Change intervention, which appears to have improved knowledge of mental health and increase responses of tolerance and support in a large community sample since its conception (Sampogna et al., 2017). Alternatively, interventions that promote inter-group contact may be effective, although evidence for long-term outcomes is weak (Thornicroft et al., 2016). However, outcomes from the current study indicate that self-disclosure was not predicted to be a comfortable experience despite public-health campaigns. Therefore, whilst public health interventions are part of the solution, they are not sufficient.

Meta-stereotypes may also be targeted in individual interventions designed to support strategic disclosure (Corrigan et al., 2015). As meta-stereotypes appear to affect SSE via rejection-expectation, this could also be targeted. For example, thought challenging may be an appropriate intervention. However, as meta-stereotypes appear to reflect actual stereotypes, they could be considered reality cognitions. In which case, Acceptance Commitment Therapy may be relevant (S. C. Hayes, Strosahl, & Wilson, 2012), where individuals are encouraged to notice thoughts without judgement and move towards values-based action. Though limited, social psychology research also indicates potential interventions for managing meta-stereotypes, including: highlighting multiple social identities (i.e. identifying with an alternative social identity; Kaye & Pennington, 2016); identifying as an individual and less as a prototypical member of the mental health group (Frey & Tropp, 2006); or providing education about the effects of meta-stereotypes (Johns, Schmader & Martens, 2005).

Limitations

To our knowledge, this is the first study to identify mental health meta-stereotypes through a purpose-designed measure. Furthermore, the study has shown some predictive validity of meta-stereotype elicitation in mental health populations and identified the impact of this on comfort with disclosure. However, limitations are noted. First, the design is cross-sectional, therefore direction of effect can not be confirmed. Whilst analyses using mean group differences and hierarchical regression have attempted to triangulate findings, one can not confirm

that meta-stereotype elicitation directly affects comfort with disclosure. Accordingly, the study may have benefitted from baseline assessments.

Secondly, post-hoc power analyses suggest the current sample can only detect an effect of at least *d* = .6. Therefore, some Type II errors may have occurred. Additionally, statistics indicate data did not always meet assumptions of normal distribution and homogeneity of variance. Skew will usually be an expected outcome given the data measured, so parametric tests were supplemented with non-parametric tests and bootstrapping to manage this, however Type I errors may have occurred.

Sampling methods attempted to recruit a representative sample by recruiting from clinical and community settings, however demographic outcomes are not representative. For example, there were high proportions of females and people of White British ethnicity. Whilst the latter is reflective of the area the study was conducted in, it may mean that results do not generalise well to males or those from other ethnicities. Additionally, the meta-stereotypes in this study may not generalise outside of the UK. Furthermore, as all participants were volunteers, this may have incurred a self-selection bias. Volunteering for a study about mental health disclosure requires disclosure in itself, therefore the sample may be more comfortable with disclosure than average. Accordingly, caution should be taken when generalising to wider populations.

Finally, it is acknowledged that the sample recruited to construct the questionnaire largely consisted of participants with anxiety or depression, whilst the sample recruited in study two had a high proportion of participants with complex mental health difficulties. Accordingly, it is possible that this affected relevance of meta-stereotype items for the latter study, which may have induced some bias. Further research may wish to consider the difference in meta-stereotype content and elicitation across differing diagnoses.

Conclusion

In summary, mental health meta-stereotypes do exist and appear to have a direct relationship with comfort with disclosure and an indirect relationship with SSE, via rejection-expectation. Accordingly, outcomes support findings from previous research that suggests imagined interactions can have as much of an impact on self-disclosure as self-stigma (Link et al., 2015) and offers alternative targets for interventions that aim to support self-disclosure. Unfortunately, outcomes also

suggest that disclosing a mental health diagnosis remains an uncomfortable experience, even when the person being disclosed to is perceived to have positive attitudes. Therefore, stigma interventions must look beyond changing individual perceptions and identify other factors that create such discomfort. This paper is the first to identify the impact of mental health meta-stereotypes and it is hoped the questionnaire constructed and current outcomes provide a springboard for further research to support self-disclosure of mental health diagnoses and the overall wellbeing of those affected.

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Executive Summary of Main Research Project

Stigma refers to an attribute that is viewed negatively by society. If somebody bears this attribute they can experience prejudice and discrimination, which can reduce self-esteem (the confidence one has in their own worth). It is generally agreed that mental health stigma exists and this can have negative effects for people who have a mental health diagnosis. This is particularly true for people who begin to stereotype themselves. For example, as well as causing lower self-esteem, hope and empowerment, people who believe the mental health stigma applies to them may choose not to tell people about (i.e. disclose) their diagnosis to 'hide' that part of their identity. Unfortunately, this can cause distress and means people might not access the support they need.

Some interventions support people to make decisions about disclosure and aim to empower people to make their own decisions, access social support and improve self-esteem. In turn, these individuals may be less likely to apply stigmatising stereotypes to themselves. Unfortunately, research suggests these interventions are not helpful for everyone and require improvement. Some research has suggested that the way you *think* others might respond to disclosure causes more distress than actual past experiences. Meta-stereotypes are stereotypes that you believe others hold about you based on the group you belong to, and are a good representation of how you think others think about you. Therefore, they might affect comfort with disclosure. However, no research has studied mental health meta-stereotypes yet, so this remains unknown.

The study had several hypotheses. First, it was hypothesised that mental health meta-stereotypes exist. Second, it was hypothesised that considering disclosing to someone with negative attitudes towards mental health would lead to stronger elicitation of meta-stereotypes, greater expectations of rejection and lower self-esteem, than considering disclosing to someone with positive attitudes. Finally, it was hypothesised that as the strength of meta-stereotype elicitation increases, comfort with disclosure and self-esteem decrease. This might be because meta-stereotypes lead to increased expectations of rejection. So, the stronger the meta-stereotypes elicitation, the more likely people are to expect rejection, which is what makes them feel less comfortable disclosing and causes low self-esteem.

This study first developed a questionnaire to measure the strength of meta-stereotype elicitation at any given time. Eleven people with current mental health

diagnoses were interviewed about the meta-stereotypes they think people hold about them. Next, these stereotypes were included in an online questionnaire to make sure a large number of people agreed with them. Overall, 133 people took part in the questionnaire, which asked people to rate how strongly they thought each stereotype would be applied to them if they had a mental health diagnosis. The strongest meta-stereotypes were used to create the final questionnaire, making sure each one was relevant to mental health and different from each other.

This questionnaire was used in another study where people were asked to imagine disclosing their diagnosis. Seventy-two participants with mental health diagnoses took part and were split into two groups, imagining someone with either positive or negative attitudes to mental health, to see how meta-stereotypes change. After they imagined the disclosure, participants completed measures of meta-stereotype elicitation, expectations of rejection, comfort with disclosure and self-esteem.

Compared with thinking about someone with positive attitudes, results showed that imagining disclosing to someone with negative attitudes made people: experience stronger meta-stereotype elicitation; have greater expectations of rejection; and feel less comfortable with disclosure. Furthermore, the strength of meta-stereotype elicitation had a bigger effect on comfort with disclosure than expectations of rejection, which suggests meta-stereotypes were the most important factor. However, results also suggest that, on average, people do not feel comfortable with disclosure, even if they believe that person has positive attitudes towards mental health.

In contrast to the hypothesis, self-esteem did not differ when imagining disclosing to someone with positive or negative attitudes. Furthermore, the strength of meta-stereotype elicitation did not affect self-esteem. This might be because self-esteem was low in this group of people already, possibly because of their experience of mental health problems. Therefore, self-esteem might be less likely to change in this experiment. In support of this explanation, results did show that wellbeing had a large effect on self-esteem and meta-stereotypes had no effect. However, further statistics showed that, whilst meta-stereotypes don't directly affect self-esteem, they do affect rejection expectation (the stronger the meta-stereotype elicitation, the more you expect to be rejected). In turn, rejection expectation affects self-esteem (the more you expect to be rejected, the lower your self-esteem).

Accordingly, meta-stereotypes might have an indirect effect on self-esteem because they affect expectations of rejection.

In summary, this study has four main findings. Firstly, the interviews and online questionnaire showed that mental health meta-stereotypes do exist and that they are shared by lots of people. These meta-stereotypes included themes like dangerousness, weakness and over-reacting. Second, the main study showed that meta-stereotypes were elicited more when imagining disclosing to someone with negative attitudes towards mental health than positive, and that the strength of meta-stereotype elicitation has an effect on how comfortable people are disclosing. Thirdly, meta-stereotypes do not appear to affect self-esteem, unless they cause an increase in expectations of rejection. In this case, self-esteem is reduced. Accordingly, interventions helping people to disclose their diagnosis might benefit from helping people manage thoughts about meta-stereotypes and rejection-expectations. Finally, and perhaps most importantly, the study showed that disclosing mental health diagnoses is not a comfortable experience, regardless of the other person's attitudes. Therefore, it is important to look beyond individual attitudes and identify other factors that might be affecting disclosure comfort. It is important for society to take some responsibility for the mental health stigma that exists and identify ways of reducing this. A starting point might be talking to people about their experience of disclosing a mental health diagnosis, to identify what contributes to disclosure discomfort.

Connecting narrative

Other than my university degrees, I had no formal experience of running research. Although this aspect of training appealed to my structured, organised nature, the thought of coming up with and designing my own research was daunting. This narrative reflects on my strategy of learning new methods in the context of subjects I knew well, including social psychology and neuropsychology.

Service Improvement Project

The service improvement project was my 'safe bet'. I had worked in neuropsychology services for most of my pre-training experience and had a good idea of what the project would involve. My external supervisor was keen and I knew that I would be well supported.

Originally, my external supervisor, Dr Alana Tooze, hoped the project would identify barriers to referral into the mild Traumatic Brain Injury (mTBI) service. However, during my literature search, I discovered that mTBI was a controversial area; aetiology and prognosis were not well defined and some researchers argued that it didn't exist. Treatment options varied and high quality research was limited. I was asked by my internal supervisor, Dr Liz Marks, "How can you ask people to refer, when you don't know the treatment is effective?". The whole project shifted to a more evaluative stance to ask, "what is it that patients with mTBI need and value?".

In light of the limited available research, the most effective way to answer this question was to ask the people themselves. And so, I gradually moved away from my 'safe bet', towards qualitative methods I had never had the confidence to try. However, as I conducted and transcribed the interviews I began to really enjoy the process. It was great to hear how helpful the service had been and reaffirmed my faith in our role as clinical psychologists. I picked up themes as I continued transcribing interviews and began to think that maybe I could do qualitative research.

In contrast, the analysis was much harder than I anticipated. I struggled with the uncertainty of coding. I wondered whether I was doing it right. I changed from identifying broader codes to very specific codes and back again. I found the work messy and ambiguous. Even with the structure provided by thematic analysis, so much of the coding was based on my judgements and I found this uncomfortable.

Developing themes and sub-themes was no easier. Iteration after reiteration, my codes moved and evolved, collapsed and combined. There are so many versions of my 'final' themes. The problem was that I could not know the "right" outcome and I could never say for definite when I had finished the analysis. I have now come to understand that the art of qualitative work is not having one final outcome that could be replicated perfectly, but recognising how your interpretations shaped the analysis and reflecting on this. It just took a while to get there.

Despite this challenge, I was pleased to see some real themes developing. It was great to see that many of the themes did link with previous research, although this could be my own confirmatory bias! Whilst qualitative analysis had once been something that I did not value to the same extent as quantitative, this piece of work helped me see the importance of exploratory work and that words have no less value than numbers. I hope to continue with qualitative research in the future, although next time around I'll know what to expect.

Main Research Project

I am a social psychologist at heart. I am interested in social processes, how they affect us and how we affect them. I studied sociology at undergraduate level and now I can't help but question how society affects us and how social psychology can explain this. It was only natural that my research would take on this slant.

My main research project is about stigma; perhaps my favourite research topic. I based my project on research I had completed in my Masters degree. I hoped that knowing the evidence base might help my research design. And it did, to an extent. I was lucky that my supervisor, Lorna Hogg, was enthusiastic about my idea and very supportive. The project was approved by the research team and people with previous experience were very positive about it. I submitted my NHS IRAS ethics fairly early and the application was not held up by many issues. The REC panel I attended was interested and supportive, with only minor amendments. Everything was going to plan and I was sticking with my Gantt chart well.

After running a pilot and speaking to a service user, I realised I had a flaw in my research design. To minimise the number of participants I needed, I had planned a repeated measures design where each participant would undertake both conditions on the same session. Naively, I had thought cross-over effects wouldn't be a problem as I planned a 15 minute break in the middle, but this pilot made me think otherwise. I met with Lorna and Paul Salkovskis, who kindly (but bluntly) put it

to me that it doesn't matter how many participants I recruit, if the design is no good, the outcomes are no good. I thought it best to change the design.

It was June by this point. My Gantt chart told me I should be recruiting in one month, I'd had ethical approval for months and now I was changing my whole research design. With that came changes to who I was to recruit, the covariates I would measure, and the questionnaires I would use. I remember working for hours to get this finished and the threat of coming off my timescale was awful, but eventually the amendment went through and my experiences that followed meant I needn't worry about losing a month, as I was to lose a lot more trying to recruit.

I have learnt that recruiting in the NHS is laden with barriers. Research and Development departments vary across trusts and while some are straight forward, others have plenty of hurdles to jump in the form of permissions and databases. Furthermore, without direct access to patients, I was reliant on clinicians listening to my research, thinking it was a good idea, sharing it with clients, and feeding the results back to me. This was no easy feat and overall my NHS recruitment was poor.

At this point, I needed another amendment to adapt my recruitment to community samples, online recruitment and the use of wider media. Unfortunately, my approach to ethics applications appears to be "pedantic" and "rushed". Accordingly, I had to repeatedly submit amendments for very small recruitment changes, rather than take my time to think about it. If I were to do this again, the best piece of advice I could give myself would be to take my time, think broadly, and stop worrying about the little things.

All the while, I realised my study design was not very feasible. I had to meet each participant face to face, and even with the amendments, recruitment was slow and labour-intensive. Luckily, I gave myself enough time to recruit and had good support from my internal supervisor and regional practitioners, so I did achieve a reasonable sample. I didn't recruit the same number of people as those running online studies, but I remind myself that that is okay in this context. Furthermore, whilst my power might be compromised, getting to meet each one of my participants was a great experience and I truly learnt a lot from them. Even if I started again, I wouldn't have changed this.

Despite all these difficulties, I am proud of my main research project. It is an area that I am passionate about and I hope that the outcomes will be useful. It was

not always easy, but I have learnt a lot of valuable lessons and, on balance, I did enjoy it (most of the time).

Literature review

The literature review was a challenge for me as I found it hard to identify a research question. This was not helped by the fact that I was nervous about doing the review and wanted to find an “easy” question. I started off in a backwards way – looking for the answers to try and figure out the question. This was not particularly helpful, as I kept coming up with questions that already had answers. After consulting my supervisor, I tried to base questions on a couple of journal articles, but found the review had already been done. I tried immersing myself in the literature, but ended up confused and could never shift from the original question I had in mind. So, I ignored it until the deadline for the proposal loomed and I couldn’t ignore it any more.

I managed to pull something together based on something I had read whilst writing up my main project proposal. I began to read about how rejection sensitivity linked with mental health problems. A very brief systematic review had been published in 2011, but so many more studies that had been completed since. I thought an update would be a great idea. Unfortunately, my supervisor didn’t agree as it was too similar to the previous review (as it happens, I’m very glad she said no, because one was published in 2017!). I decided to stick with rejection sensitivity, but refine to just one mental health problem. However, at this point, my supervisor was changed to someone who had space on their caseload but was not necessarily interested in the subject. It felt like my proposal went back and forth so many times, at times waiting for months for feedback.

This might sound insignificant, but this was my hardest time on the course. I was so confused about where I was going wrong, how I could change it, when I would be able to start. It seemed like everyone else was able to get on with it and I felt a little like I was in quicksand. Then, Dr Catherine Hamilton-Giachritsis was added to the project because she had more experience in meta-analysis. She also happened to have more of an interest in the area and after one meeting we settled on a question and methods and could start the process. The project had gone from wrong to do-able so quickly and this change made such a difference to me. This would be my second piece of advice to myself: get a supervisor who is interested!

Since then, my literature review has been fairly straightforward and feasible. I really enjoyed the process of systematic review and not having to rely on other people meant I had a little more control over timeframes. I got the bulk of the work done over my second summer and felt good about the outcomes. Research in this area was new to me, but I learnt a lot and feel like I have a good grounding in the area now. I was lucky enough to recruit another supervisor, Dr Kate Button, who could support with the statistical aspect of meta-analysis and, while these higher-level statistics were another language to me (and I definitely needed a lot of help!), I'm really glad I had the opportunity to do it and learn a new skill. I have come to appreciate the value of a good systematic review and meta-analysis and I think it's helped me become a better reader of research.

I came a long way doing this project and of all my pieces of work this is the one I am most proud of. Not just because of the results of the review, but because of my own achievements and perseverance. I've had to remind myself throughout this course that these research projects are as much about learning and practicing and I think this is my best example of that.

Case studies

My experience of writing case studies is varied and I seemed to struggle with some more than others. My first two case studies were straightforward. They weren't necessarily pre-planned, but I had a good grasp of the literature and both cases were based on "off-the-shelf" therapeutic interventions I had read about in journals and textbooks. Furthermore, I planned outcome measures well enough that it could meet the criteria for a single case experimental design. I can't say how glad I am that I got both of these out of the way in the first two placements.

In contrast, I found other case studies more difficult. One reason was because I found it hard to identify cases I thought were a perfect representation of therapy. On my learning disability and health placements, I had lots of incomplete pieces of work where people had stopped attending. Also, it was hard to pin down theory or 'off-the-shelf' interventions and outcome measures, a method I had relied upon in other placements. On my learning disability placement in particular, I did not think I had the knowledge or skills to be a learning disability therapist (and still don't). It was hard linking practice with theory when I wasn't sure I had actually done this in therapy, and reading back through my notes did make me feel like a rubbish therapist. Nevertheless, it did pass and is probably a lesson in "good enough".

In CAMHS, I had decided to write my systemic case study and submit as part of doctoral training requirements. This would tick off two requirements in one and save me time. Luckily, I had great systemic experience on this placement and really supportive supervisors who helped me identify a case and get it ready for case study. It was hard as systemic was a new way of working, but I wanted to challenge myself and try something new… up until two weeks before the end of placement where I realised I had only written half a case study and had no idea how to finish it. I cut my losses and wrote up a completely different CBT case in two days. It was a straightforward CBT case with obvious heuristic value and was a joy to write up. It passed with minor amendments and was recommended for publication. I submitted my systemic case study a week later to intermediate level and this too passed with no amendments. So, whilst trying something new is admirable and helps you learn, sticking with what you know can make life easier!

Overall, writing case studies has been a constant reminder that therapy does not always look like the textbook. I think in all of my reflections I wrote about being more proactive with choosing outcome measures, but perhaps this reflects the difficulty of choosing outcome measure outside of pre-planned research. Furthermore, looking back through clinical notes and formulations was often a reminder that the piece of work was not 'neat' and would jump around, sometimes coming off formulation. I know now that the case studies were never meant to demonstrate perfect, "textbook" pieces of work, but to show we were basing our work on some kind of theory. It was good practice to spend time getting to know the evidence base for each case study and I'm glad that each one of my case studies was quite different. Overall, although writing less structured and organised work was difficult for me to tolerate at times, it did help me learn to accept uncertainty and "good enough" a little more and was a good experience to have.

Summary

I knew the research element of training would be difficult and I'm glad that I used my interests as a foundation. At each step, I knew I wanted to use the experience to become a more proficient researcher and have challenged myself to learn new research methods and analysis techniques. Whilst I found it difficult to develop research ideas and usually needed more support with supervisors at this point, once I had research planned out I could run with it. I thoroughly enjoyed the whole process of research and would like to continue this once qualified. I have

valued the experience and being able to contribute to areas I'm passionate about has made me very proud.

I hadn't expected to develop a greater tolerance of uncertainty and learning to let go of my strict organisational structure. I know that research does not always go to plan and I now have excellent experience in amendments. I have also learnt the difficulties of research whilst working clinically and have picked up many skills in overcoming this from my supervisors. In some ways these are the more important lessons to learn and I hope they will support me as I conduct more research in the NHS.

Acknowledgements

First, I would like to thank all the research and clinical supervisors who supported me in designing, implementing and writing up this research, and to all the clinicians who sacrificed their time to help me recruit participants. With kindness and dedication, you have helped my ideas turn into full research projects and I am so grateful for the time and effort that was put in.

Second, I would like to thank the participants who took part in my studies and all those who trusted me as a therapist. I truly enjoyed meeting and speaking with each person, whose thoughts and advice will continue to shape me as I embark on qualified life. I cannot emphasise enough how important each of these experiences have been and how much I have to thank these individuals for.

On a more personal level, I want to thank the most important people in my life for making sure I have remained a person first and foremost, not just a clinical psychology machine. To my family, for supporting me and making me feel loved and cared for every day, and to the Fisher's who took me under their northern wings and have kept me well-fed ever since. To Cohort 2015, for sharing all the ups and downs of trainee life. To my friends, the E blockers, the MEd girls, and all those from places I have lived and worked since, thank you for helping me live my best life and giving me something to talk about other than the course. And to Lucy and Lauren, thank you for being my best pals for the last ten years – I hope you both know how amazing you are.

Finally, to Tom. Thank you for supporting me with love and patience, from my undergraduate to this day. I wouldn't have finished this without you and in many ways you and your circle of control deserve the doctorate much more than I do. Thank you for believing in me every step of the way, even when I didn't quite believe in myself. You are wonderful and I love you – every minute of every day.

Thank you.

Appendix A – Literature Review appendices

Appendix A1: Author guidelines for *Journal of Personality Disorders*

Journal of Personality Disorders

Instructions to Authors

Types of Articles

Regular Articles: Reports of original work should not normally exceed 30 pages (typed, double-lined spaces, and with standard margins, including tables, figures, and references). Occasionally, an author may feel that he or she needs to exceed this length (e.g., a report of a series of studies, or a report that would benefit from more extensive technical detail). In these circumstances, an author may submit a lengthier manuscript, but the author should describe the rationale for a submission exceeding 30 pages in the cover letter accompanying the submission. This rationale will be taken into account by the Editors, as part of the review process, in determining if the increased length is justified.

Invited Essays and Special Articles: These articles provide an overview of broad-ranging areas of research and conceptual formulations dealing with substantive theoretical issues. Reports of large-scale definitive empirical studies may also be submitted. Articles should not exceed 40 pages including tables, figures, and references. Authors contemplating such an article are advised to contact the editor in advance to see whether the topic is appropriate and whether other articles in this topic are planned.

Brief Reports: Short descriptions of empirical studies not exceeding 20 pages in length including tables, figures, and references.

Web-Based Submissions: Manuscripts must be produced electronically using word processing software, double spaced, and submitted along with a cover letter to http://jpd.msubmit.net. Authors may choose blind or non-blind review. Please specify which option you are choosing in your cover letter. If you choose blind review, please prepare the manuscript accordingly (e.g., remove identifying information from the first page of the manuscript, etc.). All articles should be prepared in accordance with the *Publication Manual of the American Psychological Association*. They must be preceded by a brief abstract and adhere to APA referencing format.

Tables should be submitted in Excel. Tables formatted in Microsoft Word's Table function are also acceptable. (Tables should not be submitted using tabs, returns, or spaces as formatting tools.)

Figures must be submitted separately as graphic files (in order of preference: tif, eps, jpg, bmp, gif; note that PowerPoint is not acceptable) in the highest possible resolution. Figure caption text should be included in the article's Microsoft Word file. All figures must be readable in black and white.

Permissions: Contributors are responsible for obtaining permission from copyright owners if they use an illustration, table, or lengthy quote (100+ words) that has been

published elsewhere. Contributors should write both the publisher and author of such material, requesting nonexclusive world rights in all languages for use in the article and in all future editions of it.

References: Authors should consult the publication manual of the American Psychological Association for rules on format and style. All research papers submitted to the *Journal of Personality Disorders* must conform to the ethical standards of the American Psychological Association. Articles should be written in nonsexist language. **Any manuscripts with references that are incorrectly formatted will be returned by the publisher for revision**.

Sample References:

Davis, C. G., & McKearney, J. M. (2003). How do people grow from their experience with trauma or loss? *Journal of Social & Clinical Psychology*, *22*(5), 477-492.

Dweck, C., & Wortman, C. (1982). Learned helplessness, anxiety and achievement. In H. Kron & L. Laux (Eds.), *Achievement, stress, and anxiety* (pp. 93-125). Washington, DC: Hemisphere Publishing Group.

Roelofs, J., Meesters, C., Ter Huurne, M., Bamelis, L., & Muris, P. (2006). On the links between attachment style, parental rearing behaviors, and internalizing and externalizing problems in nonclinical children. *Journal of Child and Family Studies*, *15*, 331-344.

Appendix A2: Details of adapted Quality Assessment

The Newcastle-Ottawa Quality Assessment Scale for case control (Wells et al., 2000) and cross-sectional studies (Herzog et al., 2013) were adapted for this study by removing the criterion regarding non-responders, and incorporating a two-point response for an item regarding statistical analysis (whereby an additional point is given if confidence intervals are included). The case control measure was also adapted to assess ascertainment of outcome rather than exposure, given the similarities between definition of cases and exposure.

Appendix A3: Table summarising quality assessment for cross-sectional studies included in Question 1

Paper	N	Score	Selection					Comparability of cases (max 2 points)						Outcome	
			Definition BPD accurate?	Representativeness of cases	Selection of controls	Definition of control	Ascertainment of exposure comparable	Score	*Age*	*Gender*	*Ethnicity*	*Education*	*Other*	Ascertainment of outcome	Statistical test (max score 2)
Beeney et al (2014)	44	5	1 (IPDE)	0	1 (com.)	1	1	0						0 (SR)	1
Berenson, Dochat et al (2016)	124	8	1 (SID-P-IV)	1	1 (com.)	1	1	2	*1*	*1*	*1*			0 (SR)	1
Bungert, Koppe et al (2015)	40	6	1 (IPDE)	0	1 (com.)	1	0	2	*1*			*1*		0 (SR)	1
Bungert, Liebke et al (2015)	152	6	1 (IPDE)	0	1 (com.)	1	0	2	*1*			*1*		0 (SR)	1
Chesin et al (2015)	85	5	1 (SCID-II)	0	0 (hosp.)	0	1	2		*1*			*1*	0 (SR)	1
Erbe (2014)	29	7	1 (SCID-II)	0	1 (com.)	1	1	2	*1*		*1*	*1*		0 (SR)	1
Fertuck et al (2013)	36	6	1 (SCID-II)	1	1 (com.)	1	0	1[a]	*0*[a]	*1*	*1*	*1*		0 (SR)	1
Gutz et al (2015)	50	7	1 (SCID-II)	0	1 (com.)	1	1	2		*1*		*1*		0 (SR)	1
Jobst et al (2016)	39	6	1 (SCID-II)	0	1 (com.)	1	0	2	*1*	*1*		*1*		0 (SR)	1
Rosenbach & Renneberg (2015)	63	3	1 (SCID-II)	0	1 (com.)	0	0	0						0 (SR)	1
Staebler et al (2011)	102	5	1 (SCID-II)	0	1 (com.)	0	0	2	*1*				*1*	0 (SR)	1
Thome et al (2016)	72	7	1 (IPDE)	0	1 (com.)	1	1	2	*1*			*1*		0 (SR)	1
Winter et al (2015)	53	6	1 (IPDE)	0	1 (com.)	1	0	2	*1*			*1*		0 (SR)	1

Note. SCID-II = Structure Clinical Interview for DSM-IV Axis II; SID-P-IV = Structured Interview for DSM-IV Personality; IPDE = International Personality Disorder Examination; com. = community; hosp. = hospital control. [a] Statistics showed significant differences in this factor, but no reports of controlling for it. [b] The CTQ was adapted so two subscales were amalgamated. However, this should not affect validation.

Appendix A4: Table summarising quality assessment for correlational studies included in Question 1

Paper			Selection			Comparability of cases (max 2 points)						Outcome	
	N	Quality score	Representativeness of cohort	Justified sample size	Validated ascertainment of exposure (max score 2)	Score	*Age*	*Gender*	*Ethnicity*	*Education*	*Other*	Ascertainment of outcome (max score 2)	Statistical test (max score 2)
Ayduk et al. (2008a)	379	6	0	0	2 (PAI-BOR)	2		*1*	*1*			1 (SR)	1
Ayduk et al (2008b)	104	7	1	0	2 (PAI-BOR)	2	*1*	*1*			*1*	1 (SR)	1
Berenson et al. (2009)	87	5	0	0	2 (IPDE-SQ)	1				*1*		1 (SR)	1
Berlingo (2015)	344	4	0	0	2 (PAI-BOR)	0						1 (SR)	1
Boldero et al. (2009)	101	5	0	0	2 (BPQ)	1					*1*	1 (SR)	1
Boldero et al. (2009b)	131	5	0	0	2 (BPQ)	1					*1*	1 (SR)	1
Brown (2014)	98	5	0	0	2 (PAI-BOR)	2	*1*	*1*	*1*			1 (SR)	0
De Panfilis et al. (2015a)	596	7	0	0	2 (PAI-BOR)	2	*1*	*1*	*1*			1 (SR)	2
De Panfilis et al. (2015b)	562	8	1	0	2 (PAI-BOR	2	*1*	*1*	*1*			1 (SR)	2
Gardner et al. (2010)	150	4	0	0	2 (PDQ-4-BPD)	0						1 (SR)	1
Goodman et al. (2014)	133	5	0	0	2 (SCID-II SQ)	0						1 (SR)	2
Lazarus et al. (2016)	127	5	0	0	2 (PAI-BOR)	0						1 (SR)	2
Meyer et al. (2005)	156	5	1	0	2 (SCID-II SQ)	0						1 (SR)	1
Masland (2016)	77	5	1	0	2 (SNAP -2)	0						1 (SR)	1
Miano et al. (2013)	95	5	0	0	2 (SCID-II SQ)	1		*1*	*1*[a]			1 (SR)	1

Peters et al. (2014)	411	7	0	0	2 (PAI-BOR)	2	*1*	*1*	*1*		1 (SR)	2
Rosenbach & Renneberg (2014)	193	5	0	0	2 (QTF)	0	*1*[a]				1 (SR)	2
Selby et al. (2010)	94	5	0	0	2 (SCID-II)	1		*1*			1 (SR)	1
Skinner (2014)	147	5	0	0	2 (PAI-BOR)	1		*1*[a]	*1*		1 (SR)	1
Tragesser et al. (2008)	118	5	0	0	2 (PAI-BOR)	1		*1*			1 (SR)	1
Zeilinski & Veillieux (2014)	165	5	0	0	2 (MSI-BPD)	0					1 (SR)	2

Note. PAI-BOR = Personality Assessment Inventory-Borderline Features; IPDE-SQ = International Personality Disorder Examination – Screening Questionnaire; BPD-Q = Borderline Personality Disorder Questionnaire; PDQ-4-BPD = Personality Diagnostic Questionnaire-4-Borderline Personality Disorder; SCID – II - SQ = Structure Clinical Interview for DSM-IV II – Screener Questionnaire; QTF = Questionnaire of Thoughts and Feelings; SCID-II = Structured Clinical Interview for DSM-IV Axis II MSI-BPD = McLean Screening Instrument for Borderline Personality Disorder

[a] Statistics showed significant differences in this factor, but no reports of controlling for it. [b] The CTQ was adapted so two subscales were amalgamated. However, this should not affect validation.

Appendix A5: Table describing demographic information and measurement tools used across different populations and study designs

Characteristic	Question one					Question 2
	Total (*n* = 5385)	BPD groups (*n* = 438)	Control groups (*n* = 426)	Clinical control (*n* = 248)	Community (*n* = 4273)	Total (*n* = 2688)
Mean age (SD)	27 (6.76)	29.17 (7.84)	28.01 (8.17)	33.40 (9.22)	23.72 (4.29)	25.1 (5.54)
% Female	74%	94%	90%	68%	71%	47%
	Q1 Total	Case control		Cross-sectional		Q2 Total
Country of study						
USA	21	5		16		8
Germany	9	8		1		3
Australia	2	0		2		0
UK	2	0		2		0
Turkey	0	0		0		1
Measurement of RS						
RSQ	17	4		13		7
(Amended RSQ)	6	3		3		3
ARSQ	8	4		4		2
(Amended ARSQ)	3	2		1		0
Main BPD Measure						
SCID I/II	8	7		1		2
PAI-BOR	10	0		10		0
IPDE	5	5		0		1
SCID-II-SQ	3	0		3		1
BPD-Q	2	0		2		0
BSL-23	0	0		0		1
IPDE-SQ	1	0		1		0
PDQ-4-BPD	1	0		1		0

QTF	1	0	1	1
MSI-BPD	1	0	1	0
SNAP-2	1	0	1	0
Measurement of childhood rejecting experience				
CTQ				7
CTS				1
PARQ				1
PRSQ				1
MFP				1
Questionnaire of rejection by peers				1
Early Trauma Inventory SR				1

Note. RSQ: Rejection Sensitivity Questionnaire; ARSQ: Adult Rejection Sensitivity Questionnaire; BPD: Borderline Personality Disorder; SCID-I: Structured Clinical Interview for DSM-IV Axis I; SCID-II = Structured Clinical Interview for DSM-IV Axis II; PAI-BOR = Personality Assessment Inventory-Borderline Features; IPDE = International Personality Disorder Examination; SCID – II- SQ = Structure Clinical Interview for DSM-IV II – Screener Questionnaire ; BPD-Q = Borderline Personality Disorder Questionnaire; IPDE-SQ = International Personality Disorder Examination – Screening Questionnaire; BSL-23 = Borderline Symptom List; PDQ-4-BPD = Personality Diagnostic Questionnaire-4-Borderline Personality Disorder; QTF = Questionnaire of Thoughts and Feelings; MSI-BPD = McLean Screening Instrument for Borderline Personality Disorder; SID-P-IV = Structured Interview for DSM-IV Personality; SNAP-2 = Schedule for Non-adaptive and Adaptive Personality -2; CTQ = Childhood Trauma Questionnaire; CTS = Conflict Tactics Scale; PARQ = Parental Acceptance-Rejection Questionnaire; PRSQ = Parental-Representation-Screening-Questionnaire*;* MFP = Mother-Father-Peer Scale;

[a] Additional participants refers to additional control groups other than healthy controls.

Appendix A6: Additional Forest and Funnel plots

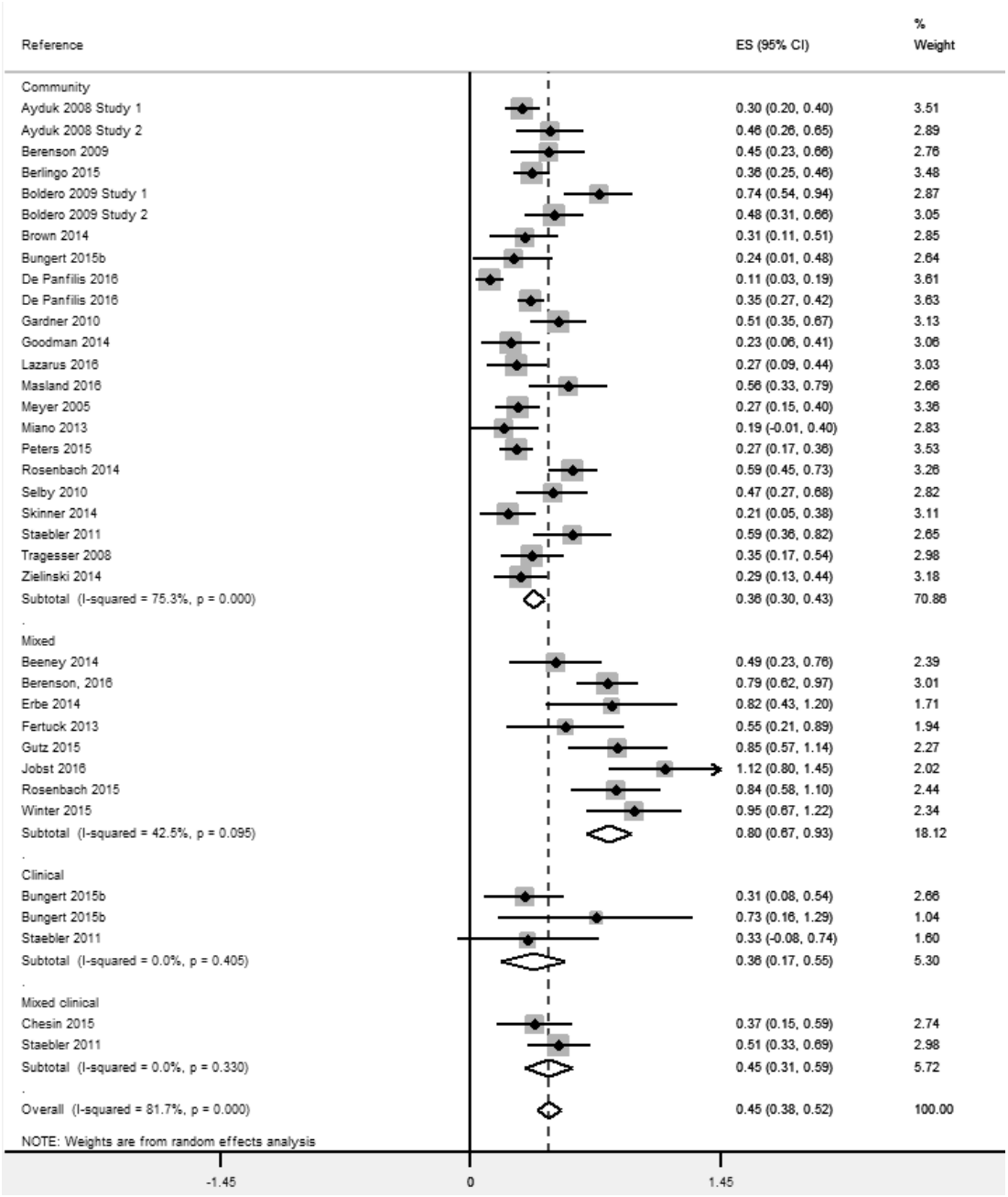


Figure 1. Forest plot for main meta-analysis

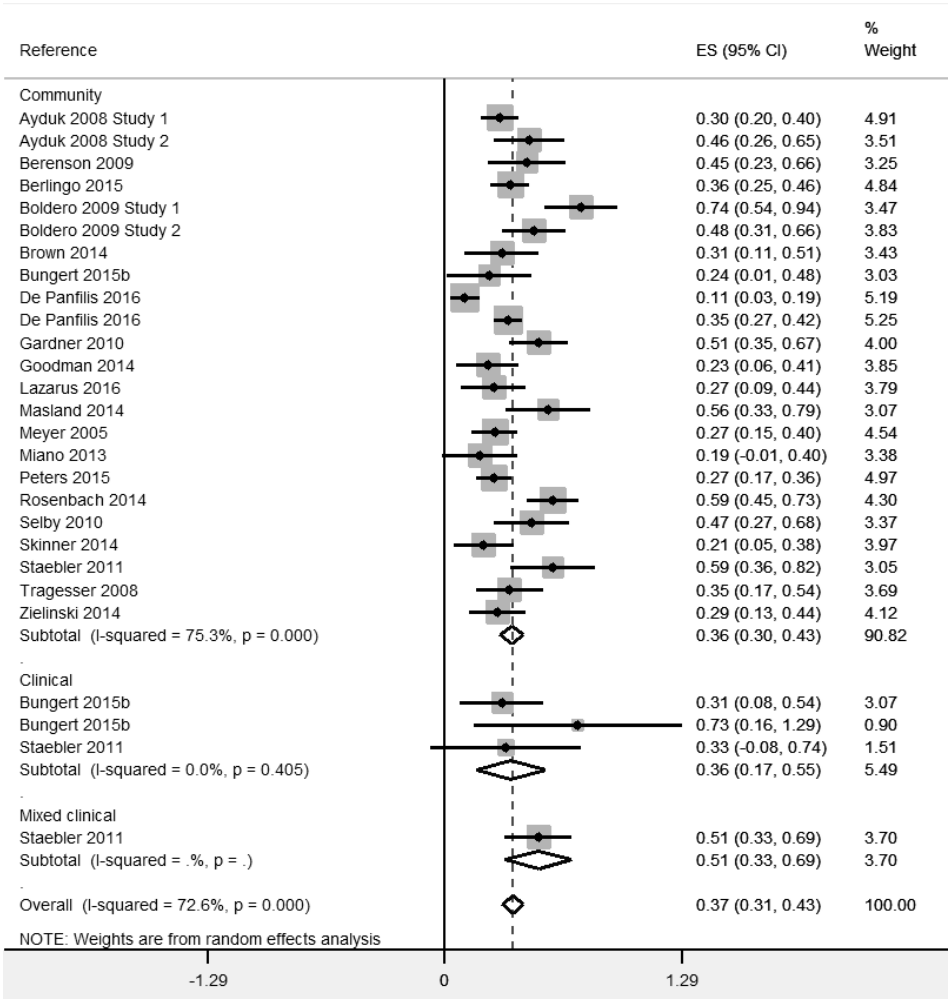


Figure 2. Forest plot for correlational meta-analysis

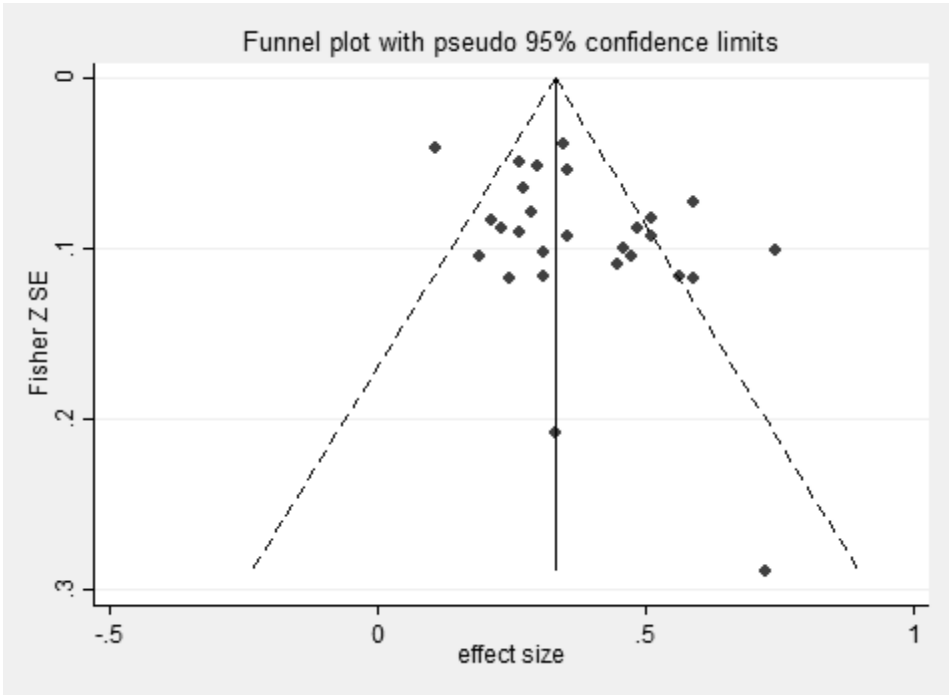


Figure 3. Funnel plot for correlational meta-analysis

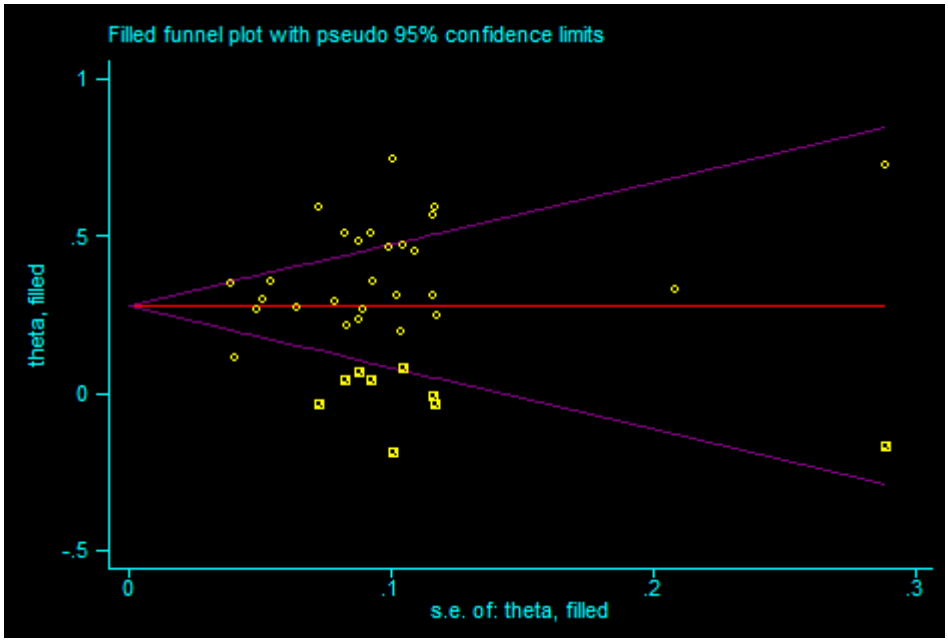


Figure 4. Trim and Fill graph for correlational analysis
Note. Square points represent filled studies

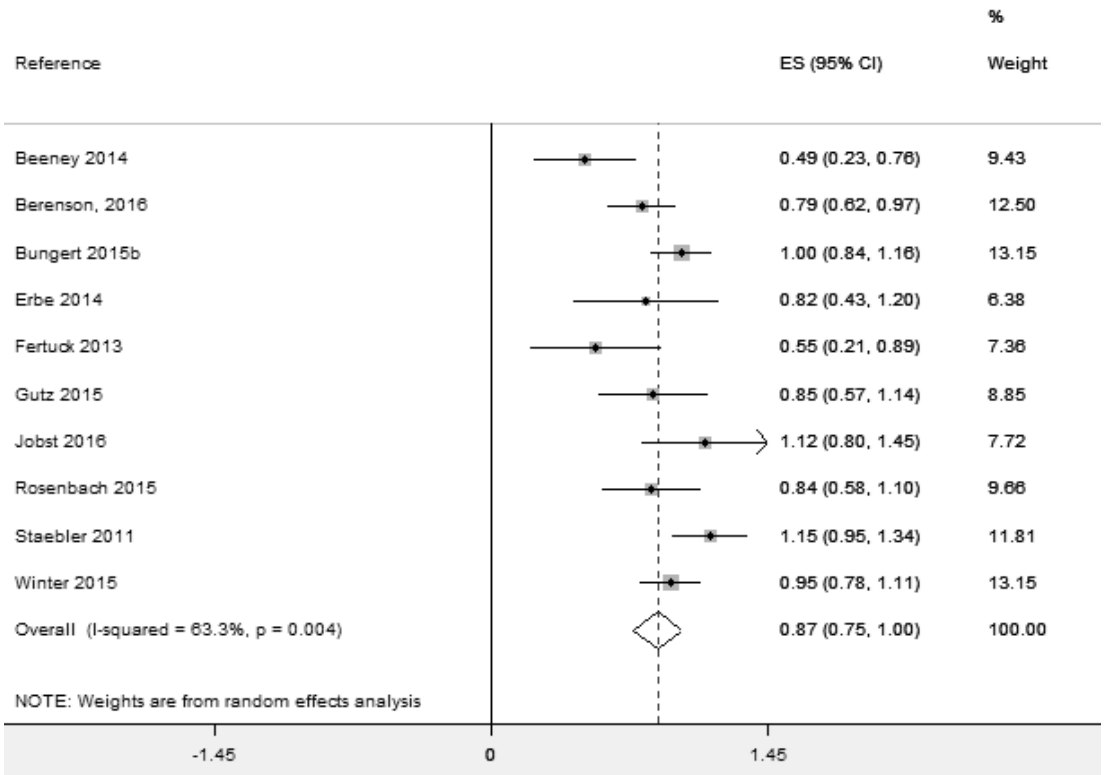


Figure 5. Forest Plot for meta-analysis of case-control studies comparing BPD and healthy control

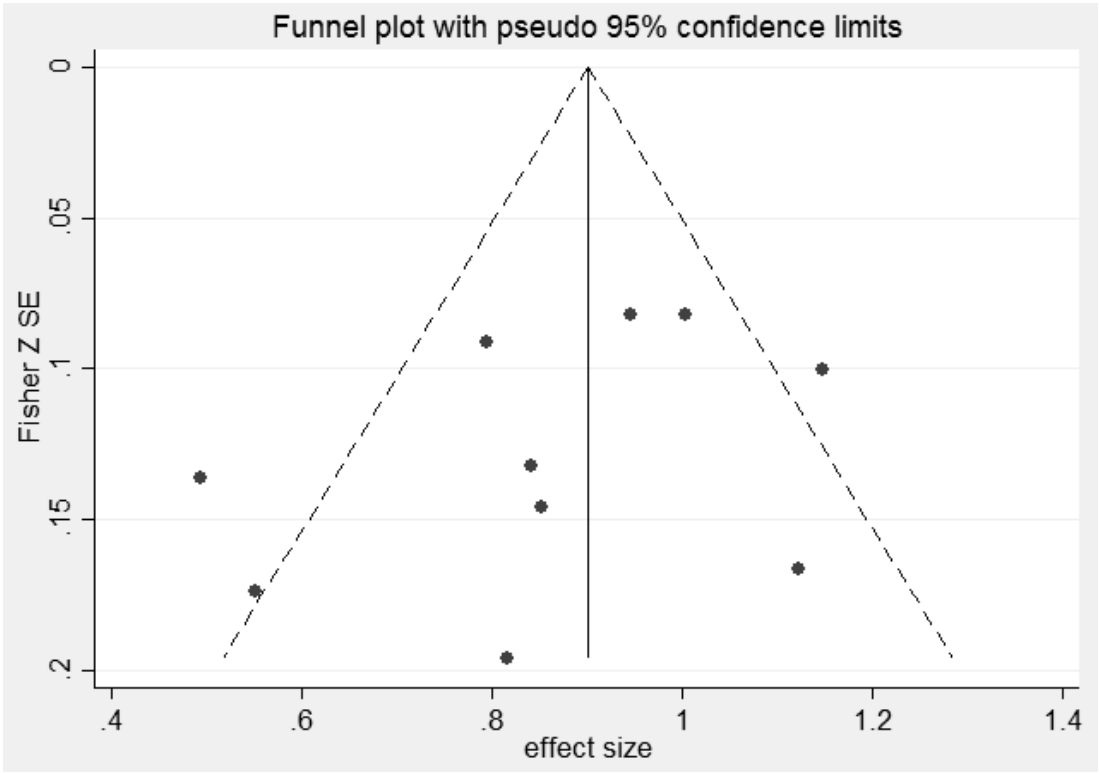


Figure 6. Funnel plot for meta-analysis with case-control studies comparing BPD and healthy control

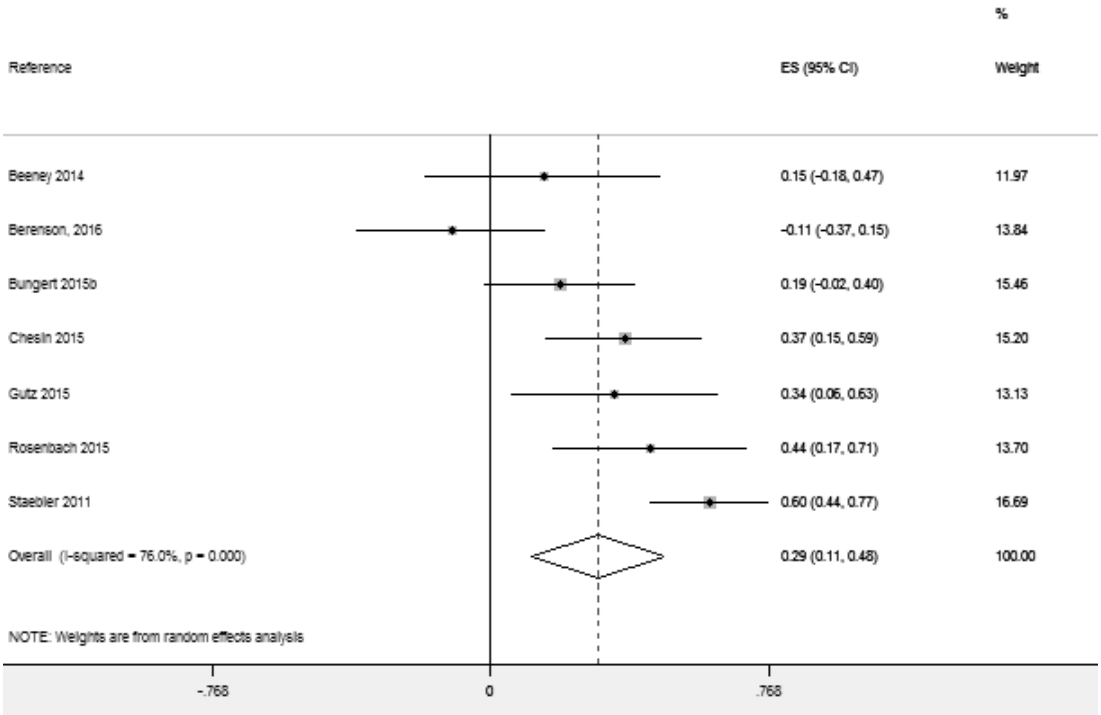


Figure 7. Forest plot for meta-analysis comparing BPD and clinical control

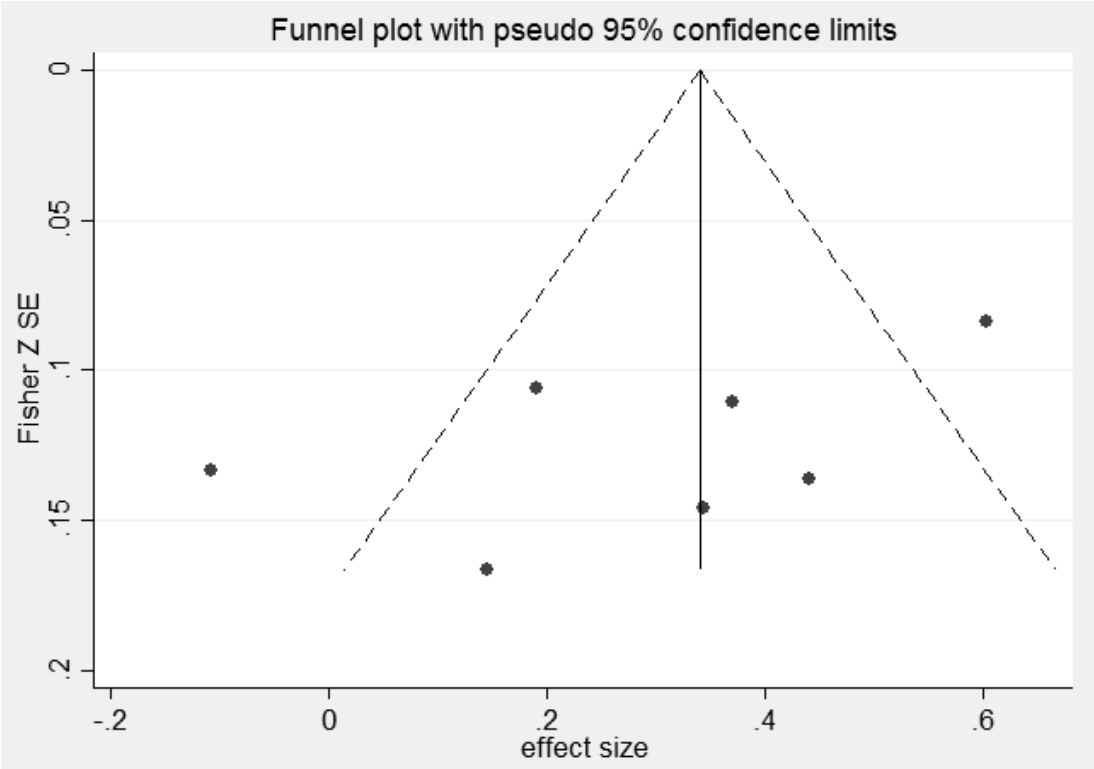


Figure 8. Funnel plot for meta-analysis comparing BPD and clinical control

Appendix A7: Table describing outcomes from univariate meta-regression

Meta-analysis Predictor	Correlation Coefficient (SE)	T value	95% CI	I^2
Main				
% females	**.0061 (.0028)**	**2.21***	**.0005; .0118**	**80.94%**
Mean age	**.0138 (.0065)**	**2.10***	**.0004; .0271**	**80.48%**
Quality	.0037 (.0349)	0.11 (n.s.)	-.0673; .0747	81.43%
RS measure				
RSQ vs. ARSQ	-.0033 (.0838)	0.04 (n.s.)	-.1669; .1736	81.90%
Study design				
Correlation vs. case control	**-.3686 (.0727)**	**5.07*****	**-.2207 -.5165**	**71.55%**
Population type				**69.23%**
Community vs. BPD	.0200 (.1313)	.15 (n.s.)	-.2474; .2874	
vs. mixed	**.4359 (.0742)**	**5.88*****	**.2848; .5870**	
vs. other clinical	.0812 (.1176)	0.69 (n.s.)	-.1584; .3207	
BPD vs. mixed	**.4159 (.1442)**	**2.88****	**.1222; .7095**	
vs. other clinical	.0612 (.1706)	0.36 (n.s.)	-.2864; .4987	
Mixed vs. other clinical	**-.3547 (.1318)**	**-2.69***	**-.6232; -.0862**	
Correlational				
% females	-.0000 (.0026)	0.03 (n.s.)	-.0053; .0054	74.65%
Mean age	.0078 (.0053)	1.49 (n.s)	-.0030; .0187	72.33%
Quality	-.0539 (.0265)	-2.04 (n.s.)	-.1084; .0006	68.46%
RS measure				72.78%
RSQ vs. ARSQ	-.0167 (.0655)	0.25 (n.s.)	-.1182; .1515	
Population type				73.59%
Community vs. BPD	-.0204 (.1319)	0.15 (n.s.)	-.2518; .2925	
vs. other clinical	.1462 (.0316)	.92 (n.s.)	-.1831; .4755	
Case control (Healthy)				
% females	.0077 (.0064)	1.21 (n.s.)	-.0070; .0223	60.52%
Mean age	-.0344 (.0247)	-1.39 (n.s.)	-.0912; .0225	56.77%
Quality	-.0066 (.0535)	-.12 (n.s.)	-.1299; .1167	66.79%
RS measure				
RSQ vs. ARSQ	-.1334 (.1340)	-1.00 (n.s.)	-.4430; .1751	63.64%
Case control (Clinical)				
% females	-.0058 (.0079)	-.74 (n.s.)	-.0261; .0144	74.81%
Mean age	-.0271 (.0260)	1.04 (n.s.)	-.0397; .0939	72.43%
Quality	-.0997 (.0512)	-1.95 (n.s.)	-.2313; .0318	64.02%
RS measure				
RSQ vs. ARSQ	-.3955(.1583)	-2.50 (n.s.)	-.8025; .0115	55.98%

Note. I^2 = I –square statistic of hetereogeneity; RS = Rejection Sensitivity; RSQ = Rejection Sensitivity Questionnaire; ARSQ = Adult Rejection Sensitivity Questionnaire; BPD = Borderline Personality Disorder; n.s. = non-significant. * p <.05, ** p <.01, *** p <.001

Appendix A8: Table summarising quality assessment for included studies in Question 2

Paper			Selection			Comparability of cases (max 2 points)						Outcome	
	N	Quality Score	Representativeness of cohort	Justified sample size	Validated ascertainment of exposure (max score 2)	Score	*Age*	*Gender*	*Ethnicity*	*Education*	*Other*	Ascertainment of outcome	Statistical test (max score 2)
Bungert et al (2015)	167	6	0	0	2 (BSL)	2	*1*		*1*			1 (SR)	1
Chesin et al (2015)	60	6	0	0	2 (CTQ[a])	2		*1*			*1*	1 (SR)	1
Erozkan (2015)	882	4	0	0	2 (CTQ)	0						1 (SR)	1
Feldman & Downey (1994)	212	5	0	0	1 (Adapted CTS)	2	*1*	*1*				1 (SR)	1
Goodman et al (2014)	133	6	0	0	2(CTQ[a])	1					*1*	1 (SR)	2
Hernandez et al (2016)	185	6	0	0	2 (CTQ)	1		*1*				1 (SR)	2
Ibrahim et al (2015)	271	6	0	0	2 (PARQ)	2	*1*	*1*	*1*			1 (SR)	1
Masland (2016)	77	5	1	0	2 (SCID-II)	0						1 (SR)	1
Pachankis et al (2015)	374	7	1	0	2 (M-F-P)	2	*1*				*1*	1 (SR)	1
Pierce et al. (2015)	423	4	0	0	2 (Early trauma inventory SR)	0						1 (SR)	1
Rosenbach & Renneberg (2014)	193	5	0	0	2 (PRSQ)	0		*1*[b]				1 (SR)	2

Note. SR = Self-report; CTQ = Childhood Trauma Questionnaire; CTS = Conflict Tactics Scale; PARQ = Parental Acceptance-Rejection Questionnaire; SCID-II = Structured Clinical Interview for DSM-IV Axis II; PRSQ = Parental-Representation-Screening-Questionnaire; MFP = Mother-Father-Peer Scale

[a] The CTQ was adapted so two subscales were amalgamated. However, this should not affect validation. [b] Statistics showed significant differences in this factor, but no reports of controlling for it.

Paper			Selection					Comparability of cases (max 2 points)						Outcome	
	N	Score	Definition BPD accurate?	Representativeness of cases	Selection of controls	Definition of control	Ascertainment of exposure comparable	Score	*Age*	*Gender*	*Ethnicity*	*Education*	*Other*	Ascertainment of outcome	Statistical test (max score 2)
Schaan & Vogele (2016)	186	6	0	1 (yes/no question)	1	1	1	0						0	2

Appendix B – Service Improvement Project Appendices

Appendix B1: Author Guidelines for *Disability and Rehabilitation*

About the journal

Disability and Rehabilitation is an international, peer reviewed journal, publishing high-quality, original research. Please see the journal's Aims & Scope for information about its focus and peer-review policy.

From 2018, this journal will be online only, and will no longer provide print copies.

Please note that this journal only publishes manuscripts in English.

Disability and Rehabilitation accepts the following types of article: Reviews, Research Papers, Case Studies, Perspectives on Rehabilitation, Reports on Rehabilitation in Practice, Education and Training, and Correspondence. Systematic Reviews should be submitted as "Review" and Narrative Reviews should be submitted as "Perspectives in Rehabilitation".

Special Issues and specific sections on contemporary themes of interest to the Journal's readership are published. Please contact the Editor for more information.

Peer review

Taylor & Francis is committed to peer-review integrity and upholding the highest standards of review. For submissions to *Disability and Rehabilitation* authors are given the option to remain anonymous during the peer-review process. Authors will be able to indicate whether their paper is 'Anonymous' or 'Not Anonymous' during submission, and should pay particular attention to the below:

- Authors who wish to remain **anonymous** should prepare a complete text with information identifying the author(s) removed. This should be uploaded as the "Main Document" and will be sent to the referees. A separate title page should be included providing the full affiliations of all authors. Any acknowledgements and the Declaration of Interest statement must be included but should be worded mindful that these sections will be made available to referees.
- Authors who wish to be **identified** should include the name(s) and affiliation(s) of author(s) on the first page of the manuscript. The complete text should be uploaded as the "Main Document".

Once your paper has been assessed for suitability by the editor, it will be peer-reviewed by independent, anonymous expert referees. Find out more about what to expect during peer review and read our guidance on publishing ethics.

Preparing your paper

All authors submitting to medicine, biomedicine, health sciences, allied and public health journals should conform to the Uniform Requirements for Manuscripts Submitted to Biomedical Journals, prepared by the International Committee of Medical Journal Editors (ICMJE).

We also refer authors to the community standards explicit in the American Psychological Association's (APA) Ethical Principles of Psychologists and Code of Conduct.

We encourage authors to be aware of standardised reporting guidelines below when preparing their manuscripts:

- Case reports - CARE
- Diagnostic accuracy - STARD
- Observational studies - STROBE
- Randomized controlled trial - CONSORT
- Systematic reviews, meta-analyses - PRISMA

Whilst the use of such guidelines is supported, due to the multi-disciplinary nature of the Journal, it is not compulsory.

Structure

Your paper should be compiled in the following order: title page; abstract; keywords; main text, introduction, materials and methods, results, discussion; acknowledgments; declaration of interest statement; references; appendices (as appropriate); table(s) with caption(s); figures; figure captions (as a list).

In the main text, an introductory section should state the purpose of the paper and give a brief account of previous work. New techniques and modifications should be described concisely but in sufficient detail to permit their evaluation. Standard methods should simply be referenced. Experimental results should be presented in the most appropriate form, with sufficient explanation to assist their interpretation; their discussion should form a distinct section.

Tables and figures should be referred to in text as follows: figure 1, table 1, i.e. lower case. The place at which a table or figure is to be inserted in the printed text should be indicated clearly on a manuscript. Each table and/or figure must have a title that explains its purpose without reference to the text.

The title page should include the full names and affiliations of all authors involved in the preparation of the manuscript. The corresponding author should be clearly designated, with full contact information provided for this person.

Word count

Please include a word count for your paper. There is no word limit for papers submitted to this journal, but succinct and well-constructed papers are preferred.

Style guidelines

Please refer to these style guidelines when preparing your paper, rather than any published articles or a sample copy.

Please use any spelling consistently throughout your manuscript.

Please use double quotation marks, except where "a quotation is 'within' a quotation". Please note that long quotations should be indented without quotation marks.

For tables and figures, the usual statistical conventions should be used.

Drugs should be referred to by generic names. Trade names of substances, their sources, and details of manufacturers of scientific instruments should be given only if the information is important to the evaluation of the experimental data.

Formatting and templates

Papers may be submitted in any standard format, including Word and LaTeX. Figures should be saved separately from the text. To assist you in preparing your paper, we provide formatting template(s).

Word templates are available for this journal. Please save the template to your hard drive, ready for use.

A LaTeX template is available for this journal. Please save the template to your hard drive, ready for use.

If you are not able to use the templates via the links (or if you have any other template queries) please contact authortemplate@tandf.co.uk

References

Please use this reference guide when preparing your paper. An EndNote output style is also available to assist you.

Checklist: what to include

1. **Author details**. Please ensure everyone meeting the International Committee of Medical Journal Editors (ICJME) requirements for authorship is included as an author of your paper. Please include all authors' full names, affiliations, postal addresses, telephone numbers and email addresses on the cover page. Where available, please also include ORCiDs and social media handles (Facebook, Twitter or LinkedIn). One author will need to be identified as the corresponding author, with their email address normally displayed in the article PDF (depending on the journal) and the online article. Authors' affiliations are the affiliations where the research was conducted. If any of the named co-authors moves affiliation during the peer-review process, the new affiliation can be given as a footnote. Please note that no changes to affiliation can be made after your paper is accepted. Read more on authorship.

2. A structured **abstract** of no more than 200 words. A structured abstract should cover (in the following order): the *purpose* of the article, its *materials and methods* (the design and methodological procedures used), the *results* and conclusions (including their relevance to the study of disability and rehabilitation). Read tips on writing your abstract.

3. You can opt to include a **video abstract** with your article. Find out how these can help your work reach a wider audience, and what to think about when filming.

4. 5-8 **keywords**. Read making your article more discoverable, including information on choosing a title and search engine optimization.

5. A feature of this journal is a boxed insert on **Implications for Rehabilitation**. This should include between two to four main bullet points drawing out the implications for rehabilitation for your paper. This should be uploaded as a separate document. Below are examples:
Example 1: Leprosy

- Leprosy is a disabling disease which not only impacts physically but restricts quality of life often through stigmatisation.
- Reconstructive surgery is a technique available to this group.
- In a relatively small sample this study shows participation and social functioning improved after surgery.
- *Example 2: Multiple Sclerosis*
- Exercise is an effective means of improving health and well-being experienced by people with multiple sclerosis (MS).
- People with MS have complex reasons for choosing to exercise or not.
- Individual structured programmes are most likely to be successful in encouraging exercise in this cohort.

0. **Acknowledgement**. Please supply all details required by your funding and grant-awarding bodies as follows: *For single agency grants*: This work was supported by the under Grant . *For multiple agency grants*: This work was supported by the under Grant ; under Grant ; and under Grant .

1. **Declaration of Interest**. This is to acknowledge any financial interest or benefit that has arisen from the direct applications of your research. Further guidance on what is a declaration of interest and how to disclose it.
2. **Data availability statement.** If there is a data set associated with the paper, please provide information about where the data supporting the results or analyses presented in the paper can be found. Where applicable, this should include the hyperlink, DOI or other persistent identifier associated with the data set(s). Templates are also available to support authors.
3. **Data deposition.** If you choose to share or make the data underlying the study open, please deposit your data in a recognized data repository prior to or at the time of submission. You will be asked to provide the DOI, pre-reserved DOI, or other persistent identifier for the data set.
4. **Supplemental online material.** Supplemental material can be a video, dataset, fileset, sound file or anything which supports (and is pertinent to) your paper. We publish supplemental

material online via Figshare. Find out more about supplemental material and how to submit it with your article.

5. **Figures.** Figures should be high quality (1200 dpi for line art, 600 dpi for grayscale and 300 dpi for colour). Figures should be saved as TIFF, PostScript or EPS files.
6. **Tables.** Tables should present new information rather than duplicating what is in the text. Readers should be able to interpret the table without reference to the text. Please supply editable files.
7. **Equations**. If you are submitting your manuscript as a Word document, please ensure that equations are editable. More information about mathematical symbols and equations.
8. **Units.** Please use SI units (non-italicized).

Using third-party material in your paper

You must obtain the necessary permission to reuse third-party material in your article. The use of short extracts of text and some other types of material is usually permitted, on a limited basis, for the purposes of criticism and review without securing formal permission. If you wish to include any material in your paper for which you do not hold copyright, and which is not covered by this informal agreement, you will need to obtain written permission from the copyright owner prior to submission. More information on requesting permission to reproduce work(s) under copyright.

Declaration of Interest Statement

Please include a declaration of interest statement, using the subheading "Declaration of interest." If you have no interests to declare, please state this (suggested wording: *The authors report no conflicts of interest*). For all NIH/Wellcome-funded papers, the grant number(s) must be included in the disclosure of interest statement. Read more on declaring conflicts of interest.

Clinical Trials Registry

In order to be published in a Taylor & Francis journal, all clinical trials must have been registered in a public repository at the beginning of the research process (prior to patient enrolment). Trial registration numbers should be included in the abstract, with full details in the methods section. The registry should be publicly accessible (at no charge), open to all prospective registrants, and managed by a not-for-profit organization. For a list of registries that meet these requirements, please visit the WHO International Clinical Trials Registry Platform (ICTRP). The registration of all clinical trials facilitates the sharing of information among clinicians, researchers, and patients, enhances public confidence in research, and is in accordance with the ICMJE guidelines.

Complying with ethics of experimentation

Please ensure that all research reported in submitted papers has been conducted in an ethical and responsible manner, and is in full compliance with all relevant codes of experimentation and legislation. All papers which report *in vivo* experiments or clinical trials on humans or animals must include a written statement in the Methods section. This should explain that all work was conducted with the formal approval of the local human subject or animal care committees (institutional and national), and that clinical trials have been registered as legislation requires. Authors who do not have formal ethics review committees should include a statement that their study follows the principles of the Declaration of Helsinki.

Consent

All authors are required to follow the ICMJE requirements on privacy and informed consent from patients and study participants. Please confirm that any patient, service user, or participant (or that person's parent or legal guardian) in any research, experiment, or clinical trial described in your paper has given written consent to the inclusion of material pertaining to themselves, that they acknowledge that they cannot be identified via the paper; and that you have fully anonymized them. Where someone is deceased, please ensure you have written consent from the family or estate. Authors may use this Patient Consent Form, which should be completed, saved, and sent to the journal if requested.

Health and safety

Please confirm that all mandatory laboratory health and safety procedures have been complied with in the course of conducting any experimental work reported in your paper. Please ensure your paper contains all appropriate warnings on any hazards that may be involved in carrying out the experiments or procedures you have described, or that may be involved in instructions, materials, or formulae.

Please include all relevant safety precautions; and cite any accepted standard or code of practice. Authors working in animal science may find it useful to consult the International Association of Veterinary Editors' Consensus Author Guidelines on Animal Ethics and Welfare and Guidelines for the Treatment of Animals in Behavioural Research and Teaching. When a product has not yet been approved by an appropriate regulatory body for the use described in your paper, please specify this, or that the product is still investigational.

Article reprints

For enquiries about reprints, please contact the Taylor & Francis Author Services team at reprints@tandf.co.uk.

Queries

Should you have any queries, please visit our Author Services website or contact us at authorqueries@tandf.co.uk.

Updated *22-01-2018*

Appendix B2: Ethical Approval from University of Bath and NHS Research and Development Office

psychology-ethics 20 July 2016 12:46

To: Mia Foxhall Cc: Elizabeth Marks

RE: Ethics 16-177

Dear Mia Foxhall

Reference number 16-177: An evaluation of a mild head injury clinic: Can Canadian guidelines support British patients?

Thank you for satisfactorily attending to those amendments. I can now confirm that you have full ethical approval for your study.

Best wishes with your research,
Dr Michael J Proulx
Chair, Psychology Research Ethics Committee

[redacted] NHS
Research Support Service

[redacted]

Friday, July 22, 2016

OUR R&D REF: 16/068/GHT/SE

Mia Foxhall
The University of Bath
Claverton Down Rd
Bath BA2 7AY.

Dear Mia,

Study Title:	An evaluation of a mild head injury clinic: Can Canadian guidelines support British patients?
REC Ref. Nº	Reference number 16-177

Thank you for forwarding information on the above study. I can confirm the approval of [redacted] NHS Foundation Trust for this study to proceed.

Your project will now be added to our Research Register on the EDGE system including the following information:

Lead Investigator	Mia Foxhall
Sponsor Organisation	University of Bath

This approval is issued on the basis of a review of the most recent documentation received in this office.

DOCUMENT	Version	Date:
Study Proposal		
Information Sheet		
Consent Form		
Invitation Letter		
Audio Consent Form		
Debrief		
Guideline Checklist		

If these are not the most recent documents, or there have been any amendments since, please inform the R&D Office immediately.

This Approval does not necessarily confer permission to start recruiting participants or collecting data

[redacted] NHS

Research Support Service

Where an NHS Organisation's role in the study involves the recruitment of participants to Clinical Research it is the responsibility of the Sponsor to ensure, before the start of the study, that site initiation is undertaken. Potential research participants should not be approached until site initiation has concluded and the 'green light' has been given by the Sponsor. If you are unsure whether this is the case, contact the R&D Team or the Sponsor.

It is important that all research conducted with NHS patients and/or staff complies with the Research Governance Framework. Within the [redacted] R&D Consortium we also require all studies (whether Clinical Trials of an Investigational Medicinal Product (CTIMP) or not) to be conducted to Good Clinical Conduct standards as described in the Medicines For Human Use Clinical Trials Regulations (2004).

If you are recruiting patients into any clinical study, you should have up to date GCP training within the last 3 years unless otherwise stated in the study protocol. If you do not have this, please contact the R&D Office immediately.

All recruitment to the above study must now be recorded on the Trust's Research Management System "EDGE" – available at www.edge.nhs.uk – if you do not have an account or need training to use the system, please contact the R&D Office immediately on 0300 422 5463. Failure to record recruitment may result in the withdrawal of any Trust Permissions for your study.

You must notify us at the above address, quoting our reference number if you make any changes to your study including, but not limited to, changes to the Chief or Principal Investigator, changes to end dates of studies, changes in funding, additional investigations, methodological changes or changes to the documentation. For studies that are sponsored by a [redacted] R&D Consortium Trust, advice must be sought from the R&D Office before changes are made to any project.

Reporting requirements for Serious Adverse Events will vary depending on the study. For reporting any adverse event or reaction, refer to the [redacted] R&DSOP02 – Adverse Event Reporting and the study protocol for guidance.

You are reminded of your responsibilities under the Data Protection Act (1998) to protect the confidentiality of any identifiable data collected during the course of this research study in the same way that protection is afforded to any identifiable data collected in the course of routine healthcare activity.

Any suspicions of active fraud or misconduct ***must*** be reported to your supervisor or manager immediately and will be treated in the strictest confidence. Alternatively, such issues can be reported to an R&D Manager or directly to the Counter Fraud Office.

As part of the Research Governance Framework, during the course of your research you may be monitored to ensure that procedures in the approved protocol are being adhered to. For locally sponsored studies this will be undertaken by the R&D Office. For externally sponsored studies this is likely to be arranged by the appropriate sponsor.

The Framework also requires the dissemination of research findings to the research subjects, NHS staff and the public. For studies sponsored by a [redacted] R&D Consortium Trust you will be expected to produce a summary of the project and an indication of how the results from the study will be disseminated. For studies where publication of research results is not the responsibility of the local Investigator, requests for such information will be made to the sponsor as required.
#

[redacted] NHS
Research Support Service

For locally sponsored studies, it is the Chief Investigator's responsibility to ensure all Research Ethics Committee Annual Reports and Development Safety Update Reports (for CTIMPs) are completed and submitted in a timely fashion. The R&D Office can assist in this process.

The approving Trust(s) reserve the right to terminate agreement for your research to proceed if, at any time, you are found to be in breach of the stipulations in this Approval Letter or fail to adequately meet the requirements of the Research Governance Framework, the Data Protection Act (1998) or The Medicines for Human Use Clinical Trials Regulations (2004) (where applicable).

If you need any further support or information, please do not hesitate to contact us at the above address, quoting the reference number for your study.

I wish you every success with your project

Yours sincerely,

pp T.LLEWELLYN

Mark Walker
Senior Research & Development Manager
([redacted] R&D Consortium)

Appendix B3: Interview Schedule

1) Can you tell me a little bit about your head injury and how it affected you?

2) Before you attended the clinic, what was your understanding of what was happening to you?

3) What were your expectations of the clinic?

4) How did your attendance at the clinic affect your understanding of what was happening?

5) How did your confidence in and ability to manage your head injury and associated symptoms change following attendance at the clinic?

6) What type of information/advice/interventions were you provided with?

7) How easy was it for you to access or get a referral to the service?

8) Could you identify any strengths of the clinic? For example, was there anything that you found particularly helpful?

9) What areas do you think could be improved in the clinic? For example was there anything particularly unhelpful or lacking in your care?

10) Overall, how satisfied were you with the service and / or treatment provided by the clinic

Appendix B4: Information sheet, consent form and debrief

UNIVERSITY OF BATH

MILD HEAD INJURY CLINIC SATISFACTION SURVEY

Information Sheet

I am inviting you to take part in a brief interview as part of a larger study evaluating the Mild Head Injury Clinic at [anonymised] Hospital. We hope this will help us to improve the service.

Before you decide if you would like to take part, it is important for you to understand why the evaluation is being done and what it will involve. Please take time to read the following information carefully and discuss it with others if you wish. Please ask if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part.

Who will conduct the project?
The study is being conducted by Mia Foxhall, a trainee clinical psychologist from the University of Bath, who is not affiliated with the service or [anonymised] Hospital.

What's involved?
The interviews are an opportunity to express your views of the service and the interventions you received, as well as asking why you attended the service and what your expectations were. You will be asked a series of questions about your expectations and experiences at the clinic by the project lead, Mia Foxhall. The interviews will last approximately 30 minutes, but may be longer if you have more you wish to say. The interviews will be audio-recorded with your agreement and will not form part of your medical records.

After the interview has finished you will be given further information about how the information gathered will be used and you will have an opportunity to ask any further questions.

Why is this study taking place?
It is known that mild head injury affects many people in this country, and can have several physical and/or psychological implications. However, the NHS does not currently have its own guidelines for Mild Head Injury Clinics, and as a result, these clinics need to carefully evaluate how well they are performing.

The study is taking to place to assess the effectiveness of the clinic and identify any improvements if necessary. Although the primary aim is to improve this service, the learning points may also be of interest for other clinics running in the country..

What are the possible benefits of taking part?
The study will provide you with an opportunity to discuss your experience of the Mild Head Injury Clinic and result will be used to identify any improvements for future clients. The findings may also help provide further evidence for the use of Mild Head Injury Clinics in the United Kingdom, and could result in clinics being improved and rolled out across other areas.

What are the possible disadvantages and risks of taking part?
We do not foresee many disadvantages to taking part in the study. However, you may find it distressing to discuss your head injury or your experiences following. If this is the case, you can stop the interview at any point or choose not to answer any questions. You will be also provided with contact information for organisations that may be able to provide support.

Although your GP will not automatically be informed of your participation, if unmet needs are highlighted during the interview, it may be necessary to inform your GP in order that appropriate support can be offered to you.

What will happen if I don't want to carry on with the study?
It is up to you to decide whether or not to take part. If you do decide to take part you will be given this information sheet to keep and be asked to sign a consent form. If you decide to take part you are still free to withdraw at any time without giving a reason. It is recommended you keep a record of your participant number in case you wish to withdraw your data at a later date.

What if there is a problem?
If you have any concerns or wish to complain about any aspect of this project, you should initially contact the project lead, Mia Foxhall, or Dr Alana Tooze who will do their best to address your concerns. Their contact details are provided below. If you remain unhappy and wish to complain formally, you can do this by contacting, the University of Bath Secretary Mark Humphriss on 01225 286212 or universitysec@bath.ac.uk. The University of Bath, as Sponsor of the study, has indemnity (insurance) arrangements in place. Every care will be taken to ensure your wellbeing during the course of this project.

How will my information be kept confidential?
You will be allocated a patient identification number and no personally identifiable information will be recorded in the data. The interview will be recorded and this will be kept on a password-protected device and in a locked filing cabinet. It will then be transcribed anonymously. The recordings will not be available for others to hear, although anonymized excerpts may be used when writing up the results. The recording will be destroyed after the study has completed.

Will I be reimbursed for taking part?
Yes, you will be provided a £5 gift voucher for agreeing to take part and travel expenses will be reimbursed.

Further information and contact details
For any further enquiries about the study, please contact the main project lead, Mia Foxhall, on m.foxhall@bath.ac.uk

For further enquiries about your care or the Mild Head Injury Clinic, please contact Dr Alana Tooze on 0300 422 5139

Thank you for taking the time to read this information sheet. If you would like to continue with the study, please let the project lead know and you will be provided with a consent form for the study and a consent form for audio-recording. Once both of the forms are signed, the interviews can begin.

UNIVERSITY OF BATH

Personal identification number:

MILD HEAD INJURY CLINIC SATISFACTION SURVEY

Consent Form

Name of Project Lead: Mia Foxhall

Please initial box

1. I confirm that I have read the information sheet for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily. ☐

2. I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason, without my medical care or legal rights being affected. ☐

3. I understand that relevant sections of my medical notes and data collected during the study, may be looked at by individuals from University of Bath and from the NHS Trust, where it is relevant to my taking part in this project. I give permission for these individuals to have access to my records. ☐

4. I agree that my GP may be contacted in case of risk to self or others ☐

5. I understand that the information collected about me may be used to support other evaluations in the future, and may be shared anonymously with other researchers. ☐

6. I agree to the use of anonymous quotes when writing up this project ☐

7. I agree that any data collected may be published in anonymous form in academic books or journals. ☐

8. I agree to take part in the above study. ☐

Name of Participant	Date	Signature
Person taking consent	Date	Signature

UNIVERSITY OF BATH

MILD HEAD INJURY CLINIC SATISFACTION SURVEY
Debrief

Thank you for taking the time to complete this interview. Your contribution is greatly appreciated.

You have taken part in an interview which will help us to understand your expectations and opinions of the Mild Head Injury Clinic you recently attended. This information will help to inform us about how well the clinic is performing, meeting guidelines leading to improvements for patients. Overall, this will help evaluate the service and identify any improvements.

Please use this time to ask any questions you might have about the study or your contribution.

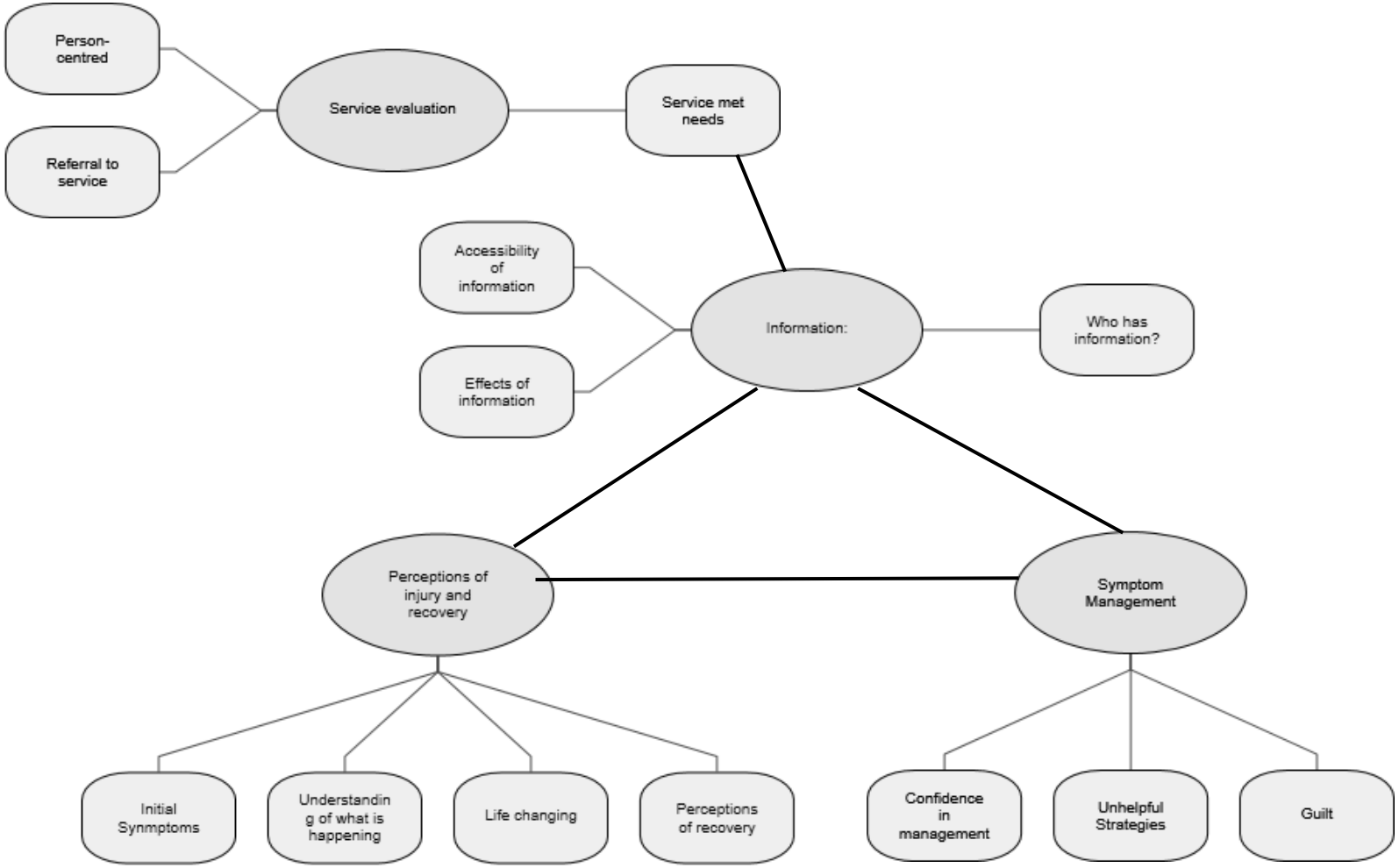
It is hoped that you leave this evaluation feeling satisfied and glad you took part. However, if you have any concerns or wish to complain about any aspect of the project then you should initially contact the project lead, Mia Foxhall, who will do her best to address your concerns. Additionally, you can contact Dr Alana Tooze, Clinical Psychologist. If you find that you feel distressed having talked about your experiences then you may also like to contact your GP or other information services about head injury, such as:

Headway: 01452 312713
(http://www.headway[redacted].org.uk/)

Please note, all of your responses are anonymous and will be kept with the strictest confidence. If you have any further queries, would like to know the outcome of the study, or would like to withdraw your data, please contact me at any point on: m.foxhall@bath.ac.uk

Once again, thank you for the time you spent completing the interview. I am very grateful and hope you have gained something from taking part.

Appendix B5: Thematic map



Appendix B6: MHIC: Assessment and Intervention Checklist

Name:			
DOB:		**NHS no:**	
Address:			

INITIAL ASSESSMENT	
Is a second-person informant in attendance?	Yes / No
Has Rivermead Post Concussion Questionnaire been completed and returned?	Yes / No
Administered self-report questionnaires (PHQ-9; GAD-7; PC-PTSD; PCL-CV; CAGE)	Yes / No
Have contributing factors been investigated, and onward referrals been made (where applicable)?	Yes / No
Are other significant potentially causative factors present	Yes / No
Was patient referred to the multidisciplinary treatment clinic within 1 month of injury?	Yes / No

PSYCHOEDUCATION	
Advise patient advised that are likely to experience one or more symptoms as a consequence of mTBI and this may persist for a short period of time but is usually expected	Yes / No
Advise patient that a full recovery of symptoms is seen in majority of cases	Yes / No
For those slow to recover: low-level exercise approx. 1 month post injury	Yes / No / NA
Education regarding the following has been provided in printed material and discussed: a. Symptoms and expected outcomes. b. Normalizing symptoms (education that current symptoms are expected and common after injury event). c. Reassurance about expected positive recovery. d. Gradual return to activities and life roles. e. Techniques to manage stress. f. Diet	 Yes / No Yes / No Yes / No Yes / No Yes / No Yes / No

HEADACHE	
Are headaches present? *(If 'No', go to 'Sleep/wake disturbance')*	**Yes / No**
Headache frequency	

Headache duration
Headache location
Headache intensity
Quality of the pain (pressure, throbbing, stabbing)
Associated symptoms (e.g. nausea/vomiting)
Precipitating/provoking factors
Alleviating factors
Previous treatment experiences and responses to date (including benefits and side-effects)
Degree of headache-related disability?

Non- pharmacological Treatment Provide education for lifestyle strategies/self-help to minimise headache	Yes / No / NA
Non-pharmacological therapies been considered (relaxation, biofeedback, fatigue management, CBT, manual therapy of the spine)	Yes / No / NA
Have non-pharmacological treatments been successful? *(If yes, go to 'sleep/wake disturbance')*	Yes / No / NA
Pharmacological Treatment Medication has been discussed and patient advised to discuss further with GP?	Yes / No / NA
Advice patients to maintain an accurate headache and medication calendar	Yes / No / NA
For patients with post-traumatic headaches that are migrainous in nature, has referral to neurologists been made?	Yes / No / NA
Narcotic analgesics should be avoided or restricted to "rescue therapy" for acute attacks when other first- and second-line therapies fail or are contraindicated. Advise patient to discuss further with GP.	Yes / No / NA
Prophylactic therapy should be considered if headaches are occurring too frequently or are too disabling, or if acute headache medications are contraindicated, poorly tolerated, or being used too frequently. Advise to discuss further with GP	Yes / No / NA

SLEEP/WAKE DISTURBANCE	
Is sleep/wake disturbance present? *(If no, go to 'persistent mental health disorder')*	**Yes / No**
Are there medical conditions, current medication use, comorbid psychopathology, and risk factors for sleep disturbances, which may influence the sleep/wake cycle *Please list:*	Yes / No / NA

Has patient been referred to specialist to manage treatment? *(Recommended if sleep disturbances persist or if there is suspicion of sleep-related breathing disorders, nocturnal seizures, periodic limb movements, or narcolepsy)* *(If yes, go to 'persistent mental health disorder)*	Yes / No / NA
Non-pharmacological treatment	
Recommended programme of sleep hygiene (in addition to other intervention)	Yes / No / NA
Recommended CBT for either primary insomnia or insomnia co-morbid to a medical or psychiatric condition.	Yes / No / NA
Considered other interventions such as exercise, and mindfulness-based stress reduction.	Yes / No / NA
Pharmacological Treatment	
Advised that this should be used on a short-term basis only due to risk of dependence.	Yes / No / NA
Advise patient to discuss medication with their GP	Yes / No / NA

PERSISTENT MENTAL HEALTH DISORDER	
Do outcomes of screen and self-report questionnaires indicate mental health disorder? *(If no, go to 'persistent cognitive difficulty')*	**Yes / No**
Referral to appropriate specialist for mental health if: • The presentation is complex and/or severe • The risk of suicide is judged significant • Initial treatment is not effective within two months • Failure of or contraindication to usual medication strategies • Presence of prominent/major risk factors known to potentially affect the course of recovery	Yes / No / NA
CBT considered for mood/anxiety disorder	Yes / No / NA
Advise patient to discuss medication queries with GP	Yes / No / NA

PERSISTENT COGNITIVE DIFFICULTIES – *after fatigue management plan*	
Are cognitive difficulties present following fatigue management plan? *(If no, go to 'vestibular/hearing dysfunction')*	**Yes / No**
Evaluated for cognitive difficulties with cognitive interview	Yes / No
Evaluated for cognitive difficulties with cognition screening tool (MoCA)	Yes / No
Considered and evaluated relevant co-morbidities	Yes / No
Considered for neuropsychological assessment	Yes / No / NA
Rehabilitation strategies used consisting of compensatory strategies and remediation if individual exhibits persisting cognitive impairments or learning of compensatory strategies is necessary in order to facilitate the resumption of functional activities and work.	Yes / No / NA
Efforts made to inform employers/teachers of potential accommodations if persistent cognitive deficits identified	Yes / No / NA

VESTIBULAR/HEARING DYSFUNCTION	
Are vestibular, hearing or visual dysfunctions present? *(If no, go to 'persistent fatigue')*	**Yes / No**
Has patient been referred to physiotherapy to manage vestibular treatment and/or nausea?	Yes / No / NA
Has patient been referred to audiology to manage hearing treatment?	Yes / No / NA

PERSISTENT FATIGUE	
Is persistent fatigue present? **(***If no, go to 'return to activity consideration')*	**Yes / No**
Dimensions of fatigue assessed and alternative/contributing causes considered	Yes / No / NA
If fatigue identified, fatigue management plan considered, including • Aim for a gradual increase in activity levels that will parallel improvement in energy levels. • Reinforce that pacing activities across the day will help patients to achieve more and to avoid exceeding tolerance levels. • Encouraging good sleep hygiene (especially regularity of sleep/wake schedules, and avoidance of stimulants and alcohol), and proper relaxation times • Using a notebook or a diary to plan meaningful goals, record activity achievement, and identify patterns of fatigue. • Acknowledging that fatigue can be exacerbated by low mood or stress.	Yes / No / NA
Leaflet with advice on coping strategies for fatigue provided	Yes / No / NA

RETURN TO ACTIVITY CONSIDERATIONS	
Recommended a period of rest with advice to avoid activities with risk of concussion	Yes / No
Bed rest for more than 3 days is not recommended	Yes / No
Encouraged to gradually return to normal activity based on tolerance	Yes / No
If normal activity involves significant physical activity: Exertion testing	Yes / No / NA
If at high risk of injury/reinjury: a more in-depth assessment of symptoms and accommodations/work restrictions identified	Yes / No / NA
If experience persistent impairment or not fully returned to pre-injury work: Referral for vocational assessment	Yes / No / NA
Is patient of school age and/or in education? *(If no, checklist is complete)*	Yes / No
Advised to, refrain from attending school/ academic activity if symptomatic in first 72 hours. If remain symptomatic following this time, avoid school for 1 week. If still symptomatic, avoid school for another week. Should return after 2 weeks	Yes / No / NA
If no return /ineffective reintegration after 4 weeks: accommodations considered	Yes / No / NA
If asymptomatic in first 72 hours: advised that can attend school but not tests and include accommodations	Yes / No / NA

The checklist has been viewed and approved by the original authors of the ONF guidelines, and they have given permission for this checklist to be used as described in this article

Appendix C – Main Research Project Appendices

Appendix C1: Author guidelines for *British Journal of Social Psychology*

The British Journal of Social Psychology publishes original papers in all areas of social psychology. Topics covered include social cognition, attitudes, group processes, social influence, intergroup relations, self and identity, nonverbal communication, and social psychological aspects of personality, affect and emotion, and language and discourse. Submissions addressing these topics from a variety of approaches and methods, both quantitative and qualitative are welcomed.

We publish papers of the following kinds:

• Empirical papers that address theoretical issues

• Theoretical papers, including analyses of existing social psychological theories and presentations of theoretical innovations, extensions, or integrations

• Review papers that provide an evaluation of work within a given area of social psychology and that present proposals for further research in that area

• Methodological papers concerning issues that are particularly relevant to a wide range of social psychologists

All papers published in The British Journal of Social Psychology are eligible for Panel A: Psychology, Psychiatry and Neuroscience in the Research Excellence Framework (REF).

1. Circulation

The circulation of the Journal is worldwide. Papers are invited and encouraged from authors throughout the world.

2. Length

The word limit for papers submitted for consideration to BJSP is 7000 words and any papers that are over this word limit will be returned to the authors. The word limit does not include the abstract, reference list, figures, or tables. Appendices however are included in the word limit. The Editor retains discretion to publish papers beyond this length in cases where the clear and concise expression of the scientific content requires greater length. In such a case, the authors should contact the Editor before submission of the paper.

3. Submission and reviewing

All manuscripts must be submitted via Editorial Manager. The Journal operates a policy of anonymous (double blind) peer review. We also operate a triage process in which submissions that are out of scope or otherwise inappropriate will be rejected by the editors without external peer review to avoid unnecessary delays. Before submitting, please read the terms and conditions of submission and the declaration of competing interests. You may also like to use the Submission Checklist to help you prepare your paper.

4. Manuscript requirements

• Contributions must be typed in double spacing with wide margins. All sheets must be numbered.

• Manuscripts should be preceded by a title page which includes a full list of authors and their affiliations, as well as the corresponding author's contact details. You may like to use this template. When entering the author names into Editorial Manager, the corresponding author will be asked to provide a CRediT contributor role to classify

the role that each author played in creating the manuscript. Please see the Project CRediT website for a list of roles.

• The main document must be anonymous. Please do not mention the authors' names or affiliations (including in the Method section) and refer to any previous work in the third person.

• Tables should be typed in double spacing, each on a separate page with a self-explanatory title. Tables should be comprehensible without reference to the text. They should be placed at the end of the manuscript but they must be mentioned in the text.

• Figures can be included at the end of the document or attached as separate files, carefully labelled in initial capital/lower case lettering with symbols in a form consistent with text use. Unnecessary background patterns, lines and shading should be avoided. Captions should be listed on a separate sheet. The resolution of digital images must be at least 300 dpi. All figures must be mentioned in the text.

• All articles should be preceded by an Abstract of between 100 and 200 words, giving a concise statement of the intention, results or conclusions of the article.

• For reference citations, please use APA style. Particular care should be taken to ensure that references are accurate and complete. Give all journal titles in full and provide DOI numbers where possible for journal articles.

• SI units must be used for all measurements, rounded off to practical values if appropriate, with the imperial equivalent in parentheses.

• In normal circumstances, effect size should be incorporated.

• Authors are requested to avoid the use of sexist language.

• Authors are responsible for acquiring written permission to publish lengthy quotations, illustrations, etc. for which they do not own copyright.

• For guidelines on editorial style, please consult the APA Publication Manual published by the American Psychological Association.

If you need more information about submitting your manuscript for publication, please email Melanie Seddon, Managing Editor (bjso@wiley.com) or phone +44 (0) 1243 770 108.

5. Supporting Information

BJSP is happy to accept articles with supporting information supplied for online only publication. This may include appendices, supplementary figures, sound files, videoclips etc. These will be posted on Wiley Online Library with the article. The print version will have a note indicating that extra material is available online. Please indicate clearly on submission which material is for online only publication. Please note that extra online only material is published as supplied by the author in the same file format and is not copyedited or typeset. Further information about this service can be found at http://authorservices.wiley.com/bauthor/suppmat.asp Authors wishing to upload data-sets are encouraged to consult the following two sites to help identify registered and certified data repositories: re3data.org or fairsharing.org

Appendix C2: Ethical approval from University of Bath (Phase 1)

psychology-ethics 1 November 2016 14:11

To: Mia Foxhall

RE: Ethics 16-231: Impact of meta-stereotypes on self-disclosure of mental health status

Dear Mia,

I am happy to approve the amended application for Phase 1 of your proposed research via Chair's Action. Thank you very much for sending through these documents. Please use the code 16-231 as proof of ethical approval for this stage of the study. Please ensure that where even anonymised participant data is stored on any device not protected by the university firewall, the device is both encrypted and password protected (password protection alone is not sufficient). There is guidance on how to encrypt a device here: http://researchdata.bath.ac.uk/guide/working-with-data/sensitive-data/

Best of luck with your data collection,
Dr. Nathalia Gjersoe
Chair, Psychology Ethics Committee

See More

psychology-ethics 19 December 2016 11:15

To: Mia Foxhall

RE: Ethics 16-231: amendment

Dear Mia,

Thank you for sending through the amended ethics application and associated attachments. I can confirm that you have full ethical approval for these changes.

Best of luck with your data collection,
Dr. Nathalia Gjersoe
Chair, Psychology Ethics Committee

See More

psychology-ethics 10 February 2017 18:07

To: Mia Foxhall

RE: Ethics 16-231: Minor amendment

Dear Mia,

I am happy to approve these amendments via Chair's Action.

Best of luck with your data collection,

Dr. Nathalia Gjersoe
Chair, Psychology Ethics Committee

psychology-ethics 16 February 2017 12:05

To: Mia Foxhall

RE: Ethics 16-231: Minor amendment

Dear Mia,

I am happy to approve these amendments via Chair's Action.

Best of luck with your data collection, Nathalia

Appendix C3: Information sheet, consent forms and debrief (Study 1, Stage 1)

UNIVERSITY OF BATH

What do you think other people think about you?
(and how is this affected by your mental health diagnosis?)

Hi, my name is Mia

I am a trainee clinical psychologist at the University of Bath. **I am inviting you to take part in a brief interview** to help us develop a questionnaire measuring mental health meta-stereotypes. These are the stereotypes that a member of a certain group thinks people outside of that group hold about them. For instance, how a female might expect a male to stereotype her for being female.

However, before you decide, **it's important for you to understand why the study is being done and what it'll involve**. Please take time to read this information carefully and discuss it with others if you wish.

Why are we doing this research?

It is believed that the way we think others stereotypes us can affect how we interact with others, which means this could affect how comfortable we are with telling them about a mental health diagnosis. This is important as research suggests that telling others about a mental health diagnosis can be good for wellbeing.

As part of a larger study, I will be asking people to imagine someone they would like to disclose to and I will measure how many of these stereotypes are activated. However, this is the first research to be conducted about these stereotypes in mental health, therefore it is important to accurately identify what these stereotypes might be.

Why am I being asked to take part?

You are being asked to take part as you are a person with previous experience of mental health problems and have responded to an advert about the study. As a result, we think you will know a lot about these stereotypes!

What's involved?

You will be asked to complete a brief interview that can be done, in person, over the phone or by an email questionnaire. I will ask you some brief questions about the type of stereotypes you think people hold about you. The interviews will last approximately 15 minutes, but may be longer if you have more you wish to say. If you agree, the interviews may be audio-recorded but will not form part of your medical records. After the interview has finished, you will be given further information about how the information gathered will be used and you will have an opportunity to ask any further questions.

What are the possible benefits of taking part?

The interviews are an opportunity to help develop a questionnaire designed to measure stereotypes in mental health. By completing this, it will allow other research to take place in the area, which might help improve programmes designed to help people disclose their diagnosis.

What are the possible disadvantages and risks of taking part?

We do not expect many disadvantages to taking part in the study. However, you may find it distressing to discuss your experiences of being stereotyped. If this is the case, you can stop the interview at any point or choose not to answer any questions. You will also be provided with contact information for organisations that may be able to provide support if you do feel distressed

V2.3 March 2017
IRAS ID: 212897

What will happen if I don't want to carry on with the study?

It is up to you to decide whether or not to take part. If you do decide to take part you will be given this information sheet to keep and be asked to sign a consent form. If you are completing this online, you will be asked to confirm you have consented electronically. If you decide to take part you are still free to withdraw at any time without giving a reason. It is recommended you keep a record of your participant number in case you wish to withdraw your data at a later date.

What if there is a problem?

If you have any concerns or wish to complain about any aspect of this project, you should initially contact me and I will do my best to address your concerns. My contact details are provided below. If you remain unhappy and wish to complain formally, you can do this by contacting the University of Bath Secretary Mark Humphriss on 01225 286212 or universitysec@bath.ac.uk. The University of Bath, as Sponsor of the study, has indemnity (insurance) arrangements in place. Every care will be taken to ensure your wellbeing during this project.

How will my information be kept confidential?

Your name will be removed from your results, so you cannot be identified. Instead you will be given a number, which only people involved in the study will know. Your consent form will be kept separate from other data in a locked container so they cannot be linked. All information collected about you will be kept confidential and conform to relevant requirements. This means all paper-based information will be locked away and all electronic information (including recordings) will be password protected, with access restricted to people involved in the study.

You will be asked if you are happy for me to audio-record your interview. If you agree, you will be asked to confirm this on the recording or sign a form. The recorded information will only be accessed by study personnel and will be transcribed by me anonymously. The recording and transcription will be kept on a password-protected device. Anonymised quotes may be used in further publications.

Personal identifiable data will be kept until the study ends, in case you want to withdraw your results. Anonymised data will be kept and securely destroyed after 5 years, consistent with Good Practice Guidelines for the conduct of research in the NHS. The Research Governance Sponsor of the study, the University of Bath, may monitor or audit this study to ensure that it is being conducted appropriately but your identity will not be revealed.

There is one exception when I can't guarantee confidentiality… as an NHS employee it's my duty to inform public services (e.g. your GP, Care Coordinator (if applicable), Social Services, Police) if you tell me anything that indicates that you or someone else is at risk, or there has been criminal activity or professional malpractice. I will try to tell you if I think I need to do this.

Further information and contact details

For any further enquiries about the study, please contact the main project lead, Mia Foxhall, on m.foxhall@bath.ac.uk. You can also find out about study results if you want. To do this, I will keep your name and email address on a password-protected device. Results should be available between May-September 2018.

Thank you for taking the time to read this leaflet. Please take as much time as you need to decide whether or not you wish to take part. If you have decided you would like to take part or if you want to get in touch for any other reason, please let me know by emailing me on m.foxhall@bath.ac.uk
Or, if you have agreed to me contacting you, you can let me know when I contact you

V2.3 March 2017
IRAS ID: 212897

UNIVERSITY OF BATH

Personal identification number:

Meta-stereotypes and how these affect disclosure of mental health status.

Consent Form

Name of Project Lead: Mia Foxhall

Please initial box

1. I confirm that I have read the information sheet for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily. ☐
2. I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason, without my medical care or legal rights being affected. ☐
3. I understand that data collected during the study, may be looked at by individuals from University of Bath and from the NHS Trust, where it is relevant to my taking part in this project. I give permission for these individuals to have access to this. ☐
4. I agree that my GP may be contacted in case of risk to self or others ☐
5. I understand that the information collected may be shared anonymously with other researchers. ☐
6. I agree that any data collected may be published in anonymous form in academic books or journals. ☐
7. I agree to take part in the above study. ☐

Name of Participant	Date	Signature
Person taking consent	Date	Signature

Personal identification number:

Meta-stereotypes and how these affect disclosure of mental health status.

Audio consent Form

Name of Project Lead: Mia Foxhall

	Please initial box
1. I confirm that I agree to my interview being recorded	☐
2. I confirm that I have been advised about how recordings will be stored and understand that it will be destroyed following study completion	☐
3. I understand that audio-recordings will be accessed by the project lead to be transcribed anonymously	☐
4. I agree to the use of anonymous quotes when writing up this project	☐

Name of Participant	Date	Signature
Person taking consent	Date	Signature

When completed: 1 for participant; 1 for researcher site file; 1 (original) to be kept in medical notes.

UNIVERSITY OF BATH

What do you think other people think about you?
(and how is this affected by your mental health diagnosis?)

Debrief

Key terms:
Meta-stereotype: *a stereotype that you believe people hold about you based on your membership to a particular group (e.g. the way a female thinks a male might stereotype her based on being female)*
Self-esteem: *confidence in your own worth or ability*
Stigma: *A 'mark of disgrace' that sets one apart, or an attribute that is viewed negatively by society*

Thank you for taking the time to complete this project. Your contribution is greatly appreciated. Please use this time to ask any questions you might have about the study or your contribution.

You have taken part in a project which will help us understand what meta-stereotypes people with a mental health diagnosis might hold. These are the stereotypes people might think people without mental health diagnosis might hold about them. This information will be used to develop a questionnaire to more easily measure meta-stereotype activation. With the questionnaire, further research around meta-stereotypes in mental health can take place.

The next phase of this project will measure how meta-stereotype activation changes when considering telling someone about a mental health diagnosis with either positive or negative attitude towards mental health. We will also measure whether this impacts self-esteem and the degree to which you expect to be rejected.

Based on previous research, we know that meta-stereotypes are usually negative and are activated when we feel evaluated by others. Therefore, we predict that the number of meta-stereotype activated will increase when we ask people to consider telling a person with negative attitudes. We predict that this will reduce self-esteem and increase the amount they expected to be rejected.

We hope that this research will help create interventions that make telling others about a mental health diagnosis easier, for instance in learning how to manage and/or change meta-stereotypes. This may help improve the well being of people with a mental health diagnosis, but we also hope that this may help reduce stigma in the long run.

It is important to remember that stereotypes are a natural shortcut people use to categorise the social world they exist in. However, these are not always negative and not always true. For example, many stereotypes are based on averages and do not represent everyone in the group. The stereotypes you were asked about may not be true, may not be perceived negatively and may not even exist. Importantly, any stereotypes that do exist have the power to be changed.

It is hoped that you leave this interview feeling satisfied and glad you took part. However, if this is not the case, you should contact me and I will do my best to address your concerns. If the stereotypes you activated have upset or distressed you in any way there is some support available to you. If you feel distressed at all after completing these questionnaires, you may wish to seek support from your care coordinator within your local mental health team (if you have one) or a national helpline if you would prefer to remain anonymous, such as **Samaritans** (08457 90 90 90)

Please note, all of your responses are anonymous and will be kept with the strictest confidence. If you have any further queries, would like to know the outcome of the study, or would like to withdraw your data, please contact me at any point on: m.foxhall@bath.ac.uk

Once again, thank you for the time you spent completing the study. I am very grateful and hope you have gained something from taking part

Appendix C4: Further details of Study 1 procedure

Stage one:

Outcomes from interviews were recorded verbatim and categorised. Labels were applied that most aptly represented the meta-stereotype. Frequency analysis was conducted to identify which meta-stereotypes were most frequently endorsed. The top 7 meta-stereotypes for both depression and psychosis were included in the online questionnaire. Five stereotypes unrelated to mental health were allocated to each depression and psychosis, depending on their relevance, to help confirm which meta-stereotypes were specific to mental health

Stage two:

Following the information sheet and consent form, participants were asked to imagine they had a diagnosis of psychosis and a brief description of possible symptoms was given. Participants were asked to rate the activation of each meta-stereotype using the following instruction:

"To what extent do you think someone without a mental health diagnosis expects you to be [meta-stereotype], based on your psychosis diagnosis?"

Twelve items on 9-point Likert scales (1 = absolutely not; 9 = absolutely) were provided. This process was repeated for depression meta-stereotypes. Demographic details were collected and participants were provided a debrief and contact details if they had further questions or wished to withdraw.

Questionnaire construction

The 5 highest rated meta-stereotypes for psychosis and depression were amalgamated. Upon consultation with two professionals in the field, items were removed for being similar to diagnostic criteria or diagnosis-specific ('always be affected'; 'sad all the time'; 'need to cheer up'). The next highest rated stereotypes were included instead ('unable to function'; 'over-reacting'; 'attention seeking'). Existing literature was reviewed to assess construct validity and many of the meta-stereotypes were acknowledged, particularly themes of dangerousness, weakness, and responsibility (Angermeyer & Dietrich, 2006; Brockington, Hall, Levings, & Murphy, 1993; Corrigan et al., 2002).

Appendix C5: Online questionnaire, including Information sheet, consent form, and debrief (Study 1, Stage 2)

Stereotypes about mental health (part 2*)

0% complete

Page 1: Page 1

Hi, my name is Mia

I am a trainee clinical psychologist at the University of Bath. **I am inviting you to take part in a brief questionnaire** to help us develop a measure of mental health meta-stereotypes. These are the stereotypes a member of a certain group thinks people outside of that group hold about them. For instance, how a female might expect a male to stereotype her for being female.

Before you decide if you would like to take part, it is important for you to understand why this is being done and what it will involve. Please take time to read the information carefully and discuss it with others if you wish. Please ask if there is anything that is not clear or if you would like more information.

Why is this study taking place?

It is thought that these stereotypes might affect how we interact with others. One thing this could affect is how willing people are to tell others about a mental health diagnosis. This is important because some research suggests it can be good for your wellbeing to tell others

Who will conduct the project?

The study is being conducted by Mia Foxhall, a trainee clinical psychologist from the University of Bath.

What's involved?

This is the first research to be conducted about these types of stereotypes in mental health, therefore it is important to accurately identify what these stereotypes might be. You will be asked to imagine you have a mental health diagnosis. Then, you will be asked to complete a questionnaire asking you about the type of stereotypes you think people might hold about you. You will do this twice, for two different diagnoses. This will take approximately 10-15 minutes to complete.

After the questionnaire has finished you will be given further information about how the information gathered will be used and you can ask any further questions.

Please note: you must be over the age of 18 and a UK resident to take part. I am also unable to recruit people who consider themselves to be very unwell with mental health problem at this time.

What are the possible benefits of taking part?

The questionnaire is an opportunity to help develop a tool to measure the level of mental health stereotypes activated at any given time. By completing this, it will allow other research to take place in the area. This might help improve programmes designed the help people tell others about their mental health diagnosis.

What are the possible disadvantages and risks of taking part?

We don't expect many disadvantages to taking part in the study. However, you may find it distressing to imagine having a mental health diagnosis or being stereotyped. If this is the case, you can stop the questionnaire at any point or choose not to answer any questions. You will also be provided with contact information for organisations that may be able to provide support.

What will happen if I don't want to carry on with the study?

It is up to you to decide whether or not to take part. If you do decide to take part you will be asked to confirm you would like to continue online. This acts as a 'signature' confirming that you have said yes. If you decide to take part you are still free to withdraw at any time without giving a reason.

What if there is a problem?

If you have any concerns or wish to complain about any aspect of this project, you should initially contact the project lead, Mia Foxhall who will do their best to address your concerns. Their contact details are provided below. If you remain unhappy and wish to complain formally, you can do this by contacting, the University of Bath Secretary Mark Humphriss on 01225 286212 or universitysec@bath.ac.uk. The University of Bath, as Sponsor of the study, has indemnity (insurance) arrangements in place. Every care will be taken to ensure your wellbeing during the course of this project.

How will my information be kept confidential?

You will be allocated a patient identification number and no personally identifiable information (e.g. name or address) will be collected. The data collected will only be accessed by the project lead, project supervisors and statistical advice services. The data will be destroyed 5 years after study completion.

Further information and contact details

For any further enquiries about the study, please contact the main project lead, Mia Foxhall, on m.foxhall@bath.ac.uk

Thank you for taking the time to read this information sheet. If you would like to continue with the study, please continue with the questionnaire. By continuing with the questionnaire you are confirming that you have read this information sheet. The next page will show a consent form, which you will be asked to complete in order to continue. Once this has been done, the questionnaire can begin.

Next >

Stereotypes about mental health (part 2*)

16% complete

Page 2: Consent

I confirm that I have read the information sheet for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily. * *Required*

- ○ Yes
- ○ No

I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason, without my medical care or legal rights being affected. * *Required*

- ○ Yes
- ○ No

I understand that data collected during the study, may be looked at by individuals from University of Bath. I give permission for these individuals to have access to this. * *Required*

- ○ Yes
- ○ No

I understand that the information collected may be shared anonymously with other researchers. * *Required*

- ○ Yes
- ○ No

I agree that any data collected may be published in anonymous form in academic books or journals. * *Required*

- ○ Yes
- ○ No

I agree to take part in the above study. * *Required*

○ Yes ○ No

If you have said "Yes" to all of the above and consent to taking part in the interview, please continue with the questionnaire.

By continuing with the questionnaire you confirm that you are consenting to taking part in the study. You are still free to withdraw at any point - you can do this by contacting me on m.foxhall@bath.ac.uk

If you have any other questions before consenting, you can email me on m.foxhall@bath.ac.uk

< Previous Next >

Stereotypes about mental health (part 2*)

33% complete

Page 3: Mental Health Stereotypes

Are you over the age of 18? * *Required*

- ○ Yes
- ○ No

Are you a resident of the United Kingdom? * *Required*

- ○ Yes
- ○ No

Do you consider yourself to be a person with a mental health difficulty? * *Required*

- ○ Yes
- ○ No

Do you consider yourself to be *very unwell* with a mental health difficulty? * *Required*

- ○ Yes
- ○ No

< Previous

Next >

Stereotypes about mental health (part 2*)

50% complete

Page 4: Mental Health Stereotypes: Psychosis

As part of the next phase, I would like you to **imagine that you are a person with a diagnosis of psychosis**.

If you have psychosis, you can experience unusual symptoms such as hearing voices or have strongly held beliefs about things that are unlikely to be true. Sometimes, psychosis is associated with the following diagnoses: schizophrenia, mania, psychotic depression.

As a person with a diagnosis of psychosis, imagine what other people might think about you.

For each of the following questions, I would like you to rate how much you think people without a mental health diganosis might stereotype you on a scale of 0-9

(0 = absolutely not; 9 = absolutely)

This part of the survey uses a table of questions, view as separate questions instead?

To what extent do you think someone without a mental health diagnosis expects you to be **dangerous**, based on your psychosis diagnosis? * *Required*

	1	2	3	4	5	6	7	8	9	
Absolutely not	☐	☐	☐	☐	☐	☐	☐	☐	☐	Absolutely

This part of the survey uses a table of questions, view as separate questions instead?

To what extent do you think someone without a mental health diagnosis expects you to be **stuck up**, based on your psychosis diagnosis?

	1	2	3	4	5	6	7	8	9	
Absolutely not	☐	☐	☐	☐	☐	☐	☐	☐	☐	Absolutely

This part of the survey uses a table of questions, view as separate questions instead?

To what extent do you think someone without a mental health diagnosis expects you to be **crazy**, based on your psychosis diagnosis?

	1	2	3	4	5	6	7	8	9	
Absolutely not	☐	☐	☐	☐	☐	☐	☐	☐	☐	Absolutely

This part of the survey uses a table of questions, view as separate questions instead?

To what extent do you think someone without a mental health diagnosis expects you to be **plain**, based on your psychosis diagnosis?

	1	2	3	4	5	6	7	8	9	
Absolutely not	☐	☐	☐	☐	☐	☐	☐	☐	☐	Absolutely

This part of the survey uses a table of questions, view as separate questions instead?

To what extent do you think someone without a mental health diagnosis expects you **will always be this way**, based on your psychosis diagnosis?

	1	2	3	4	5	6	7	8	9	
Absolutely not	☐	☐	☐	☐	☐	☐	☐	☐	☐	Absolutely

This part of the survey uses a table of questions, view as separate questions instead?

To what extent do you think someone without a mental health diagnosis expects you **to be fussy**, based on your psychosis diagnosis? * *Required*

Please don't select more than 1 answer(s) per row.

Please select at least 1 answer(s).

	1	2	3	4	5	6	7	8	9	
Absolutely not	☐	☐	☐	☐	☐	☐	☐	☐	☐	Absolutely

This part of the survey uses a table of questions, view as separate questions instead?

To what extent do you think someone without a mental health diagnosis expects you to be **strange**, based on your psychosis diagnosis?

	1	2	3	4	5	6	7	8	9	
Absolutely not	☐	☐	☐	☐	☐	☐	☐	☐	☐	Absolutely

This part of the survey uses a table of questions, view as separate questions instead?

To what extent do you think someone without a mental health diagnosis expects you to **not be familiar with modern technology**, based on your psychosis diagnosis?

	1	2	3	4	5	6	7	8	9	
Absolutely not	☐	☐	☐	☐	☐	☐	☐	☐	☐	Absolutely

This part of the survey uses a table of questions, view as separate questions instead?

To what extent do you think someone without a mental health diagnosis expects you to be **unpredictable**, based on your psychosis diagnosis?

	1	2	3	4	5	6	7	8	9	
Absolutely not	☐	☐	☐	☐	☐	☐	☐	☐	☐	Absolutely

This part of the survey uses a table of questions, view as separate questions instead?

To what extent do you think someone without a mental health diagnosis expects you to be **unable to function normally (i.e. work, go to school)**, based on your psychosis diagnosis?

	1	2	3	4	5	6	7	8	9	
Absolutely not	☐	☐	☐	☐	☐	☐	☐	☐	☐	Absolutely

This part of the survey uses a table of questions, view as separate questions instead?

To what extent do you think someone without a mental health diagnosis expects you to **take illegal drugs**, based on your psychosis diagnosis?

	1	2	3	4	5	6	7	8	9	
Absolutely not	☐	☐	☐	☐	☐	☐	☐	☐	☐	Absolutely

This part of the survey uses a table of questions, view as separate questions instead?

To what extent do you think someone without a mental health diagnosis expects you will be unfashionable, based on your psychosis diagnosis? * *Required*

	1	2	3	4	5	6	7	8	9	
Absolutely not	☐	☐	☐	☐	☐	☐	☐	☐	☐	Absolutely

< Previous Next >

Stereotypes about mental health (part 2*)

66% complete

Page 5: Mental Health Stereotypes: Depression

As part of the next phase, I would like you to **imagine that you are a person with a diagnosis of depression**.

If you have depression, you can experience very low mood. You may feel low in energy and find it difficult to eat or sleep. You may have feelings of hopelessness and guilt, or you could become irritable.

As a person with a diagnosis of depression, imagine what other people might think about you.

For each of the following questions, I would like you to rate how much you think people without a mental health diganosis might stereotype you on a scale of 0-9

(0 = absolutely not; 9 = absolutely)

This part of the survey uses a table of questions, view as separate questions instead?

To what extent do you think someone without a mental health diagnosis expects you to be **pushy**, based on your depression diagnosis?

	1	2	3	4	5	6	7	8	9	
Absolutely not	☐	☐	☐	☐	☐	☐	☐	☐	☐	Absolutely

This part of the survey uses a table of questions, view as separate questions instead?

To what extent do you think someone without a mental health diagnosis expects you to be **over-reacting**, based on your depression diagnosis?

	1	2	3	4	5	6	7	8	9	
Absolutely not	☐	☐	☐	☐	☐	☐	☐	☐	☐	Absolutely

This part of the survey uses a table of questions, view as separate questions instead?

To what extent do you think someone without a mental health diagnosis expects that you **should cheer-up**, based on your depression diagnosis?

	1	2	3	4	5	6	7	8	9	
Absolutely not	☐	☐	☐	☐	☐	☐	☐	☐	☐	Absolutely

This part of the survey uses a table of questions, view as separate questions instead?

To what extent do you think someone without a mental health diagnosis expects you **to be vulgar**, based on your depression diagnosis? ✱ *Required*

	1	2	3	4	5	6	7	8	9	
Absolutely not	☐	☐	☐	☐	☐	☐	☐	☐	☐	Absolutely

This part of the survey uses a table of questions, view as separate questions instead?

To what extent do you think someone without a mental health diagnosis expects you to be **a bad driver**, based on your depression diagnosis?

	1	2	3	4	5	6	7	8	9	
Absolutely not	☐	☐	☐	☐	☐	☐	☐	☐	☐	Absolutely

This part of the survey uses a table of questions, view as separate questions instead?

To what extent do you think someone without a mental health diagnosis expects that you **are using depression as an excuse,** based on your depression diagnosis?

	1	2	3	4	5	6	7	8	9	
Absolutely not	☐	☐	☐	☐	☐	☐	☐	☐	☐	Absolutely

This part of the survey uses a table of questions, view as separate questions instead?

To what extent do you think someone without a mental health diagnosis expects you to be **involved in crime**, based on your depression diagnosis? ✱ *Required*

	1	2	3	4	5	6	7	8	9	
Absolutely not	☐	☐	☐	☐	☐	☐	☐	☐	☐	Absolutely

This part of the survey uses a table of questions, view as separate questions instead?

To what extent do you think someone without a mental health diagnosis expects you to **be weak,** based on your depression diagnosis?

	1	2	3	4	5	6	7	8	9	
Absolutely not	☐	☐	☐	☐	☐	☐	☐	☐	☐	Absolutely

This part of the survey uses a table of questions, view as separate questions instead?

To what extent do you think someone without a mental health diagnosis expects you to be **sad all the time,** based on your depression diagnosis?

	1	2	3	4	5	6	7	8	9	
Absolutely not	☐	☐	☐	☐	☐	☐	☐	☐	☐	Absolutely

This part of the survey uses a table of questions, view as separate questions instead?

To what extent do you think someone without a mental health diagnosis expects you to be **malingering (i.e. trying to escape duties or work)**, based on your depression diagnosis?

	1	2	3	4	5	6	7	8	9	
Absolutely not	☐	☐	☐	☐	☐	☐	☐	☐	☐	Absolutely

This part of the survey uses a table of questions, view as separate questions instead?

To what extent do you think someone without a mental health diagnosis expects you to be **attention-seeking**, based on your depression diagnosis?

	1	2	3	4	5	6	7	8	9	
Absolutely not	☐	☐	☐	☐	☐	☐	☐	☐	☐	Absolutely

This part of the survey uses a table of questions, view as separate questions instead?

To what extent do you think someone without a mental health diagnosis expects you to be **stupid**, based on your depression diagnosis?

	1	2	3	4	5	6	7	8	9	
Absolutely not	☐	☐	☐	☐	☐	☐	☐	☐	☐	Absolutely

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Stereotypes about mental health (part 2*)

83% complete

Page 6: Demographic details

How old are you? * *Required*

Please enter a whole number (integer).

What is your gender?

- ○ Male
- ○ Female
- ○ Other

‹ Previous

Finish ✔

Stereotypes about mental health (part 2*)

100% complete

Debrief

Your responses to this survey have been submitted.

Thank you for taking the time to complete this project. Your contribution is greatly appreciated. Please use this time to ask any questions you might have about the study or your contribution.

You have taken part in a project which will help us understand what meta-stereotypes people with a mental health diagnosis might hold. These are the stereotypes people might think people without a mental health diagnosis might hold about them.

This information will be used to develop a questionnaire to more easily measure meta-stereotype activation. With the questionnaire, further research around meta- stereotypes in mental health can take place.

The next phase of this project will measure how meta-stereotype activation changes when considering telling someone about a mental health diagnosis with either positive or negative attitude towards mental health. We will also measure whether this impacts self-esteem and the degree to which you expect to be rejected.

Based on previous research, we know that meta-stereotypes are usually negative and are activated when we feel evaluated by others. Therefore, we predict that the number of meta-stereotype activated will increase when we ask people to consider telling a person with negative attitudes. We predict that this will reduce self-esteem and increase the amount they expected to be rejected.

We hope that this research will help create interventions that make telling others about a mental health diagnosis easier, for instance in learning how to manage and/or change meta-stereotypes. This may help improve the well being of people with a mental health diagnosis, but we also hope that this may help reduce stigma in the long run.

It is important to remember that stereotypes are a natural shortcut people use to categorise the social world they exist in. However, these are not always negative and not always true. For example, many stereotypes are based on averages and do not represent everyone in the group. The stereotypes you were asked about may not be true, may not be perceived negatively and may not even exist. Importantly, any stereotypes that do exist have the power to be changed.

It is hoped that you finish this questionnaire feeling satisfied and glad you took part. However, if this is not the case, you should contact me and I will do my best to address your concerns. If the stereotypes you activated have upset or distressed you in any way there is some support available to you. If you feel distressed at all after completing these questionnaires, you may wish to seek support from your care coordinator within your local mental health team or a national helpline if you would prefer to remain anonymous such as **Samaritans** (08457 90 90 90)

Please note, all of your responses are anonymous and will be kept with the strictest confidence. If you have any further queries, would like to know the outcome of the study, or would like to withdraw your data, please contact me at any point on: m.foxhall@bath.ac.uk

The top of the page will show your Receipt ID - please keep this safe in case you would like to withdraw your response.

Once again, thank you for the time you spent completing the study. I am very grateful and hope you have gained something from taking part

Appendix C6: Meta-stereotype elicitation questionnaire

Mental health stereotypes

Below are 10 statements about how you think this person would stereotype you. For each one, circle the number which most represents how strongly you think this person holds these views. As a guide, 1 = absolutely not, 5 = neutral, and 9 = absolutely (but you can mark any number in between).

1) To what extent do you think this person expects you to be **dangerous**, based on your mental health diagnosis?										
Absolutely not	1	2	3	4	5	6	7	8	9	Absolutely

2) To what extent do you think this person expects you to be **using your mental health diagnosis as an excuse**?										
Absolutely not	1	2	3	4	5	6	7	8	9	Absolutely

3) To what extent do you think this person expects you to be **crazy**, based on your mental health diagnosis?										
Absolutely not	1	2	3	4	5	6	7	8	9	Absolutely

4) To what extent do you think this person expects you to be **weak**, based on your mental health diagnosis?										
Absolutely not	1	2	3	4	5	6	7	8	9	Absolutely

5) To what extent do you think this person expects you to **malingering (i.e. trying to escape duties or work)**, based on your mental health diagnosis?										
Absolutely not	1	2	3	4	5	6	7	8	9	Absolutely

6) To what extent do you think this person expects you to be **strange**, based on your mental health diagnosis?										
Absolutely not	1	2	3	4	5	6	7	8	9	Absolutely

7) To what extent do you think this person expects you to be **unable to function normally (i.e. go to school/work etc.),** based on your mental health diagnosis?										
Absolutely not	1	2	3	4	5	6	7	8	9	Absolutely

8) To what extent do you think this person expects you to be **unpredictable**, based on your mental health diagnosis?										
Absolutely not	1	2	3	4	5	6	7	8	9	Absolutely

9) To what extent do you think this person expects you are **over-reacting**, based on your mental health diagnosis?										
Absolutely not	1	2	3	4	5	6	7	8	9	Absolutely

10) To what extent do you think this person expects you to be **attention-seeking**, based on your mental health diagnosis?										
Absolutely not	1	2	3	4	5	6	7	8	9	Absolutely

Appendix C7: Ethical Approval for from HRA, relevant Research and Development Office, and University of Bath (including amendments) (Study 2)

NHS
Health Research Authority

Ms Mia Foxhall
Clinical Psychologist in Training
Taunton and Somerset NHS Foundation Trust
Department of Clinical Psychology, 10W
University of Bath, Claverton Down,
Bath
BA2 7AY

Email: hra.approval@nhs.net

23 March 2017

Dear Ms Foxhall,

Letter of HRA Approval

Study title:	**Does meta-stereotype activation impact rejection-expectation when considering self-disclosure of mental health status?**
IRAS project ID:	**212897**
Protocol number:	**N/A**
REC reference:	**16/WA/0373**
Sponsor	**University of Bath**

I am pleased to confirm that **HRA Approval** has been given for the above referenced study, on the basis described in the application form, protocol, supporting documentation and any clarifications noted in this letter.

Participation of NHS Organisations in England

The sponsor should now provide a copy of this letter to all participating NHS organisations in England.

Appendix B provides important information for sponsors and participating NHS organisations in England for arranging and confirming capacity and capability. **Please read *Appendix B* carefully**, in particular the following sections:

- *Participating NHS organisations in England* – this clarifies the types of participating organisations in the study and whether or not all organisations will be undertaking the same activities
- *Confirmation of capacity and capability* - this confirms whether or not each type of participating NHS organisation in England is expected to give formal confirmation of capacity and capability. Where formal confirmation is not expected, the section also provides details on the time limit given to participating organisations to opt out of the study, or request additional time, before their participation is assumed.
- *Allocation of responsibilities and rights are agreed and documented (4.1 of HRA assessment criteria)* - this provides detail on the form of agreement to be used in the study to confirm capacity and capability, where applicable.

Further information on funding, HR processes, and compliance with HRA criteria and standards is also provided.

It is critical that you involve both the research management function (e.g. R&D office) supporting each organisation and the local research team (where there is one) in setting up your study. Contact details and further information about working with the research management function for each organisation can be accessed from www.hra.nhs.uk/hra-approval.

Appendices

The HRA Approval letter contains the following appendices:

- A – List of documents reviewed during HRA assessment
- B – Summary of HRA assessment

After HRA Approval

The document *"After Ethical Review – guidance for sponsors and investigators",* issued with your REC favourable opinion, gives detailed guidance on reporting expectations for studies, including:

- Registration of research
- Notifying amendments
- Notifying the end of the study

The HRA website also provides guidance on these topics, and is updated in the light of changes in reporting expectations or procedures.

In addition to the guidance in the above, please note the following:

- HRA Approval applies for the duration of your REC favourable opinion, unless otherwise notified in writing by the HRA.
- Substantial amendments should be submitted directly to the Research Ethics Committee, as detailed in the *After Ethical Review* document. Non-substantial amendments should be submitted for review by the HRA using the form provided on the HRA website, and emailed to hra.amendments@nhs.net.
- The HRA will categorise amendments (substantial and non-substantial) and issue confirmation of continued HRA Approval. Further details can be found on the HRA website.

Scope

HRA Approval provides an approval for research involving patients or staff in NHS organisations in England.

If your study involves NHS organisations in other countries in the UK, please contact the relevant national coordinating functions for support and advice. Further information can be found at http://www.hra.nhs.uk/resources/applying-for-reviews/nhs-hsc-rd-review/.

If there are participating non-NHS organisations, local agreement should be obtained in accordance with the procedures of the local participating non-NHS organisation.

IRAS project ID	212897

User Feedback

The Health Research Authority is continually striving to provide a high quality service to all applicants and sponsors. You are invited to give your view of the service you have received and the application procedure. If you wish to make your views known please use the feedback form available on the HRA website: http://www.hra.nhs.uk/about-the-hra/governance/quality-assurance/.

HRA Training

We are pleased to welcome researchers and research management staff at our training days – see details at http://www.hra.nhs.uk/hra-training/

Your IRAS project ID is **212897**. Please quote this on all correspondence.

Yours sincerely

Thomas Fairman
HRA Assessor

Email: hra.approval@nhs.net

Copy to: *Prof Jonathan Knight, University of Bath, (Sponsor Contact)*
Mr Mark Walker, 2gether NHS Foundation Trust, (Lead NHS R&D Contact)

IRAS project ID	212897

Appendix A - List of Documents

The final document set assessed and approved by HRA Approval is listed below.

Document	*Version*	*Date*
Copies of advertisement materials for research participants [Advert Phase 1b]	1	27 October 2016
Evidence of Sponsor insurance or indemnity (non NHS Sponsors only) [Proof of university insurance]	1	18 July 2016
Interview schedules or topic guides for participants [Interview Schedule Phase 1a]	1	27 October 2016
IRAS Application Form [IRAS_Form_10112016]		10 November 2016
IRAS Checklist XML [Checklist_30122016]		30 December 2016
Letter from sponsor	1	27 October 2016
Letters of invitation to participant [Invitation letter Phase 2]	1	27 October 2016
Other [Response to HRA Assessment request for clarifications]		10 March 2017
Other [HRA Schedule of Events_2gether]	1	20 March 2017
Other [HRA Schedule of Events_AWP]	1	20 March 2017
Other [HRA Statement of Activities_AWP]	1	20 March 2017
Other [HRA Statement of Activities_2gether]	1	20 March 2017
Other [Sponsor confirmation of non-substantial amendment]		21 March 2017
Participant consent form [Consent form_information sharing]	2.3	01 March 2017
Participant consent form	1.3	01 March 2017
Participant consent form [Audioconsent form]	1	27 October 2016
Participant information sheet (PIS) [Information sheet 1a]	2.3	01 March 2017
Participant information sheet (PIS) [Information sheet 1b]	2.3	01 March 2017
Participant information sheet (PIS) [Information sheet 2]	2.3	01 March 2017
Research protocol or project proposal [Protocol]	1	26 September 2016
Summary CV for Chief Investigator (CI) [CV]	1	27 October 2016
Summary CV for supervisor (student research) [Academic Supervisor CV]	1	14 November 2016
Summary, synopsis or diagram (flowchart) of protocol in non technical language [Flowchart Phase 1]	1	27 October 2016
Summary, synopsis or diagram (flowchart) of protocol in non technical language [Flowchart Phase 2]	1	27 October 2016
Validated questionnaire [Self-Esteem Scale]	1	27 October 2016
Validated questionnaire [Rejection expectation measure]	1	27 October 2016

IRAS project ID	212897

Appendix B - Summary of HRA Assessment

This appendix provides assurance to you, the sponsor and the NHS in England that the study, as reviewed for HRA Approval, is compliant with relevant standards. It also provides information and clarification, where appropriate, to participating NHS organisations in England to assist in assessing and arranging capacity and capability.

For information on how the sponsor should be working with participating NHS organisations in England, please refer to the, *participating NHS organisations, capacity and capability* and *Allocation of responsibilities and rights are agreed and documented (4.1 of HRA assessment criteria)* sections in this appendix.

The following person is the sponsor contact for the purpose of addressing participating organisation questions relating to the study:

Name: Professor Jonathan Knight
Email: pro-vc-research@bath.ac.uk

HRA assessment criteria

Section	HRA Assessment Criteria	Compliant with Standards	Comments
1.1	IRAS application completed correctly	Yes	No comments
2.1	Participant information/consent documents and consent process	Yes	No comments
3.1	Protocol assessment	Yes	No comments
4.1	Allocation of responsibilities and rights are agreed and documented	Yes	The sponsor has submitted the HRA Statement of Activities and intends for this to form the agreement between the sponsor and study sites. The sponsor is not requesting, and does not require any additional contracts with study sites.
4.2	Insurance/indemnity arrangements assessed	Yes	Where applicable, independent contractors (e.g. General Practitioners) should ensure that the professional

Section	HRA Assessment Criteria	Compliant with Standards	Comments
			indemnity provided by their medical defence organisation covers the activities expected of them for this research study
4.3	Financial arrangements assessed	Yes	No application for external funding has been made. No study funding will be provided to sites, as detailed at Schedule 1 of the Statement of Activities.
5.1	Compliance with the Data Protection Act and data security issues assessed	Yes	No comments
5.2	CTIMPS – Arrangements for compliance with the Clinical Trials Regulations assessed	Not Applicable	No comments
5.3	Compliance with any applicable laws or regulations	Yes	No comments
6.1	NHS Research Ethics Committee favourable opinion received for applicable studies	Yes	REC Favourable Opinion was issued by the Wales Research Ethics Committee 3 on the 8th March 2017. Amended documents were submitted on by the researchers to comply with HRA Approval standards. These were classified by the sponsor as a non-substantial amendment.
6.2	CTIMPS – Clinical Trials Authorisation (CTA) letter received	Not Applicable	No comments
6.3	Devices – MHRA notice of no objection received	Not Applicable	No comments
6.4	Other regulatory approvals and authorisations received	Not Applicable	No comments

Participating NHS Organisations in England

This provides detail on the types of participating NHS organisations in the study and a statement as to whether the activities at all organisations are the same or different.

All participating NHS organisations will undertake the same study activities. There is therefore only one study site 'type' involved in the research.

The Chief Investigator or sponsor should share relevant study documents with participating NHS organisations in England in order to put arrangements in place to deliver the study. The documents should be sent to both the local study team, where applicable, and the office providing the research management function at the participating organisation. For NIHR CRN Portfolio studies, the Local LCRN contact should also be copied into this correspondence. For further guidance on working with participating NHS organisations please see the HRA website.

If chief investigators, sponsors or principal investigators are asked to complete site level forms for participating NHS organisations in England which are not provided in IRAS or on the HRA website, the chief investigator, sponsor or principal investigator should notify the HRA immediately at hra.approval@nhs.net. The HRA will work with these organisations to achieve a consistent approach to information provision.

Confirmation of Capacity and Capability

This describes whether formal confirmation of capacity and capability is expected from participating NHS organisations in England.

NHS organisations in England that are participating in the study **will be expected to formally confirm their capacity and capability** to host this research.

- Following issue of this letter, participating NHS organisations in England may now confirm to the sponsor their capacity and capability to host this research, when ready to do so. How capacity and capacity will be confirmed is detailed in the Allocation of responsibilities and rights are agreed and documented (4.1 of HRA assessment criteria) section of this appendix.
- The Assessing, Arranging, and Confirming document on the HRA website provides further information for the sponsor and NHS organisations on assessing, arranging and confirming capacity and capability.

Principal Investigator Suitability

This confirms whether the sponsor position on whether a PI, LC or neither should be in place is correct for each type of participating NHS organisation in England and the minimum expectations for education, training and experience that PIs should meet (where applicable).

A/No Principal Investigator/Local Collaborator should be appointed at study sites.

GCP training is not a generic training expectation, in line with the HRA statement on training expectations.

HR Good Practice Resource Pack Expectations

This confirms the HR Good Practice Resource Pack expectations for the study and the pre-engagement checks that should and should not be undertaken
If members of the external research team will be attending NHS sites to conduct the study activities detailed at IRAS A18 and A19 they should obtain a Letter of Access. This would be on the basis of a Research Passport or an NHS to NHS confirmation of pre-engagement checks letter (if NHS employed). Pre-engagement checks should confirm standard DBS checks, appropriate barred list checks, and occupational health clearance.

Other Information to Aid Study Set-up

This details any other information that may be helpful to sponsors and participating NHS organisations in England to aid study set-up.
The applicant has indicated that they do intend to apply for inclusion on the NIHR CRN Portfolio.

Johnson Nigel 27 April 2017 14:18

To: Mia Foxhall Cc: Walker Mark, Genevieve Riley

IRAS 212897 Confirmation of Capacity and Capability for [redacted] NHS Foundation Trust

JN

Dear Mia,

IRAS 212897 Confirmation of Capacity and Capability for [redacted] NHS Foundation Trust

Study Title: Does meta-stereotype activation impact rejection-expectation when considering self-disclosure of mental health status?

REC reference: 16/WA/0373

Our R&D reference: 17/016/2gt

This email acknowledges that [redacted] Research Support Service is able to confirm capacity and capability to deliver the above referenced study on behalf of [redacted] NHS Foundation Trust.

Please also find attached your letter of access, as Mark has said you may not necessarily need this but you have this in hand.

If you wish to discuss further, please do not hesitate to contact me.

Kind Regards

Nigel

Nigel Johnson| Research Governance Support Officer| [redacted] Hospitals NHS Foundation Trust/[redacted] NHS Foundation Trust/[redacted] Care Services/[redacted] Clinical Commissioning Group

[redacted]

MCCANN, Bryony ([redacted] NHS TRUST) 19 May 2017 15:44

To: Mia Foxhall and 3 more...

997AWP R&D confirmation

Dear Mia,

Title of study: Does meta-stereotype activation impact rejection-expectation when considering self-disclosure of mental health status?
[redacted] ref: 997AWP
R&D confirmation date: 19/05/2017
Recruitment end date: 01/04/2018
Study end date: 01/05/2018
Clinical Teams for which confirmation granted: [redacted]

Thank you very much for applying to undertake your research in AWP, we pride ourselves on a straight forward and rapid process for research governance.

We are pleased to advise we are able to grant R&D Confirmation at Avon and Wiltshire Mental Health Partnership NHS Trust ("the Trust") to cover the locations as stated above. Please find attached the AWP logo to use on any local documents you will be issuing i.e. information sheets and consent forms.

Under the conditions of approval, you are required to:

1. Document any study activity on RiO for the relevant patient records, if applicable. Please refer to the attached RiO guidance document. If you do not have access to RiO and only need to update service user's records as above, you can ask a member of the clinical team to do this for you. Please ensure the attached procedures are still adhered to. If you need access to RiO for any other reason, please advise the AWP R&D office using the contact details below.

2. Update recruitment figures regularly via EDGE (a Clinical Management System). This enables us to keep a clear track of all Trust-wide study activity, which we need to report to our research funders. **Failure to comply with this will result in your research being suspended, so please make sure you complete this on a monthly basis.** We will set up an account for you, and your login instructions will be emailed to you. Please refer to the attached EDGE guidance document.

3. Notify us if you plan to recruit participants from any clinical team not outlined above.

4. To meet [redacted] R&D audit requirements and adhere to Good Clinical Practice guidelines, you will also need to ensue you create and manage a study site file. If you need more information on this please contact the AWP R&D department or visit the NIHR website: http://www.crn.nihr.ac.uk/learning-development/good-clinical-practice/gcp-resources-templates-and-reference-documents/

The R&D Management Permission in the Trust is valid until **01/05/2018.** If you require any extension to this in the future please contact us to arrange.

We hope you are successful in your recruitment aims and objectives.

Study Amendments:
For further information regarding how to notify us of any amendments to your study please refer to the amendments guidance found at:
http://www.hra.nhs.uk/research-community/during-your-research-project/amendments/

Event reporting:
You are reminded you must report any adverse event or incident whether or not you feel it is serious, quoting the study reference number. This requirement is in addition to informing the Chairman of the relevant Research Ethics Committee.

At the end of your research:
You are required to submit to the Associate Director of Research & Development (Hannah Antoniades) a final outcome report on completion of your study, and if necessary to provide interim annual reports on progress. Should publications arise, please also send copies for inclusion in the study's site file. This way we can ensure those involved within the Trust are aware of your findings and can consider your recommendations. Please send a copy of your final report to [redacted]research@nhs.net.

General Research Governance Information:
You must also abide by the research and information governance requirements for any research conducted within the NHS:

- Work must be carried out in line with the Research Governance Framework which details the responsibilities of everyone involved in research.
- You must comply with the Data Protection Act 1998 and where required, have up to date Data Protection Registration with the Information Commissioners Office. Where staff are employed, this includes having robust contracts of employment in place and ensuring that staff are made aware of their obligations through training and similar initiatives.
- You must ensure that you understand and comply with the requirements of the NHS Confidentiality Code of Practice: (http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_4069253)
- You must have appropriate policies and procedures in place covering the security, storage, transfer and disposal of information both personal and sensitive, or corporate sensitive information. Any information security breach must be reported immediately to the Trust.
- Where access is granted to sensitive corporate information, this must not be further disclosed without the explicit consent of the Trust unless there is an override required by law. Where disclosure is required under the Freedom of Information Act 2000, the Trust will assist you in processing the request.

Please note that, as a public authority, the Trust is obligated to comply with the provisions of the Freedom of Information Act 2000, including the potential disclosure of information held by the Trust in connection with this study. Where a request for potential disclosure of personal, corporate sensitive, or contract information is made under the Freedom of Information Act 2000, due regard shall be made to any duty of confidentiality or commercial interest.

Best wishes,

Dr Krist Noonan
Research & Development Operations Manager
[redacted]

Statement of Activities_M...all_2.docx

[redacted] NHS Trust

RiO use in Research v6.5 Feb2017.pdf

AWP EDGE Researcher Step by Ste...uide v4.pdf

Nathalia Gjersoe 23 March 2017 15:49

To: Mia Foxhall

RE: Ethics 16-231. Phase 2 approved by IRAS/HRA

NG

Dear Mia,

Thank you very much for these. I have included them with your application, number 16-231. You have full ethical approval from the University of Bath Psychology Dept., including these additions.

Best of luck with your research,
Dr. Nathalia Gjersoe
Chair, Psychology Ethics Committee

Amendment 1 (non-substantial)

AMENDMENTS, Hra (HEALTH RESEARCH AUTHORITY) 30 May 2017 15:22

To: Mia Foxhall Cc: pro-vc-research@bath.ac.uk, and 1 more...

RE: IRAS ID: 212897; Notification of non-substantial amendment - Category C amendment

AH

Dear Mia,

IRAS Project ID:	212897
Short Study Title:	Impact of metastereotypes on self-disclosure of mental health status
Date complete amendment submission received:	25/05/2017
Amendment No./ Sponsor Ref:	NSA # 1 - amendment of contact details on PIS
Amendment Date:	25/05/2017
Amendment Type:	**Non-substantial**

Thank you for submitting the above referenced amendment. In line with the UK Process for Handling UK Study Amendments I can confirm that this amendment has been categorised as:

Category C - An amendment that has no implications that require management or oversight by the participating NHS organisations

As such, the sponsor may implement this amendment **as soon as any relevant regulatory approvals are in place** (for participating organisations in England, please see 'Confirmation of Assessment Arrangements' below).

As Chief Investigator/Sponsor, it remains your responsibility to ensure that the research management offices and local research teams (if applicable) at each of your participating organisations are informed of this amendment.

Note: you may only implement changes described in the amendment notice or letter.

Participating NHS Organisations in England – Confirmation of Assessment Arrangements

Further to the details above, I can confirm that no HRA assessment of this amendment is needed.

- If this study has HRA Approval, this amendment may be implemented at participating NHS organisations in England once the conditions detailed in the categorisation section above have been met
- If this study is a pre-HRA Approval study, this amendment may be implemented at participating NHS organisations in England that have NHS Permission, once the conditions detailed in the categorisation section above have been met. For participating NHS organisations in England that do not have NHS Permission, these sites should be covered by HRA Approval before the amendment is implemented at them, please see below;
- If this study is awaiting HRA Approval, I have passed your amendment to my colleague in the assessment team and you should receive separate notification that the study has received HRA Approval, incorporating approval for this amendment.

Please do not hesitate to contact me if you require further information.

Kind regards

Alka Bhayani

Substantial Amendment 2

AMENDMENTASSESSMENT, Hra (HEALTH RESEARCH AUTHORITY) 25 July 2017 13:58

AH

To: AMENDMENTS, Hra (HEALTH RESEARCH AUTHORITY), and 4 more...

RE: IRAS 212897 AM04 Assessment of Amendment Complete

Dear Ms Foxhill,

Further to the below, I am pleased to confirm that HRA Approval has been issued for the referenced amendment, following assessment against the HRA criteria and standards.

The sponsor should now work collaboratively with participating NHS organisations in England to implement the amendment as per the below categorisation information. This email may be provided by the sponsor to participating organisations in England to evidence that the amendment has HRA Approval.

Please contact hra.amendments@nhs.net for any queries relating to the assessment of this amendment.

Kind regards

Kevin Ahmed
Assessor

Health Research Authority

Room 001 | Jarrow Business Centre | Rolling Mill Rd, Jarrow | NE32 3DT
T. 0207 104 8171
E. Kevin.Ahmed1@nhs.net
W. www.hra.nhs.uk

Sign up to receive our newsletter HRA Latest.

MCCANN, Bryony ([redacted] PARTNE... 6 July 2017 11:06

MB

To: Mia Foxhall

Acknowledgement of Substantial amendment 2- [redacted]

Dear Mia,

Title of study: **Does meta-stereotype activation impact rejection-expectation when considering self-disclosure of mental health status?**
IRAS ref: **212897**
Amendment no: **Substantial amendment 2**

This amendment has been reviewed at [redacted] NHS TRUST and can be implemented once all other appropriate approvals (e.g. HRA, REC, MHRA etc.) are in place. **Please ensure you forward us copies of any other approvals as they become available, if you have not done so already.**

Please contact us using the details below if you require any further information.

Best wishes,

Bryony McCann
Senior R&D Officer

Research & Development
[redacted]

Llewellyn Thomas 28 July 2017 09:14

To: Mia Foxhall Cc: Johnson Nigel, Walker Mark

17/016/2gt Project Approval

Dear Mia,

Re: **Does meta-stereotype activation impact rejection-expectation when considering self-disclosure of mental health status?**

This is an email to confirm capacity and capability for your project to commence within [redacted] NHS Foundation Trust. The governance review is complete. If you have any questions please feel free to contact me tel 03004225462 or Mark Walker tel 03004225463. Best wishes. Tom

PLEASE NOTE NEW EMAIL ADDRESS: T●LLEWELLYN@NHS.NET

Thomas Llewellyn » Research & Development Manager « » [redacted] NHS Foundation Trust « » Research & Development Office « » [redacted]

psychology-ethics 26 July 2017 09:51

To: Mia Foxhall

Ethics 16-231 Amendment

Dear Mia,

Thank you for letting us know about these amendments. I am happy to confirm that you have received full ethical approval, via Chair's Action. Your file will be updated to include these changes.

Please be aware that to be in keeping with the university specifications regarding storage of personal human data, data files must be encrypted as well as password protected. Password protection alone is not sufficient. Given the sensitive nature of this project, please ensure that this guidance is followed. University guidelines and support are available here: http://www.bath.ac.uk/data-protection/guidance/academic-research/index.html

Best of luck with your research,
Dr. Nathalia Gjersoe
Chair, Psychology Ethics Committee

Substantial Amendment 4 (a modified version of Amendment 3)

AMENDMENTASSESSMENT, Hra (HEALTH RESEARCH AUTH... 22 November 2017 10:18

To: Mia Foxhall, Helen Williams (Health and Care Research Wales), and 2 more...

RE: IRAS 212897. Confirmation of Amendment Assessment

AH

Dear Mia,

Further to the below, I am pleased to confirm that HRA Approval has been issued for the referenced amendment, following assessment against the HRA criteria and standards.

The sponsor should now work collaboratively with participating NHS organisations in England to implement the amendment as per the below categorisation information. This email may be provided by the sponsor to participating organisations in England to evidence that the amendment has HRA Approval.

Please contact hra.amendments@nhs.net for any queries relating to the assessment of this amendment.

Kind regards,

Lauren

Lauren Allen
Assessor

Health Research Authority

E. hra.amendments@nhs.net
T: 02071048032
W. www.hra.nhs.uk

JOHNSON, Nigel ([redacted] HOSPITALS NHS FOUND... 4 January 2018 15:44

To: Mia Foxhall, nigel.johnson@[redacted]nhs.uk and 1 more...

IRAS 212897 Confirmation of Capacity and Capability for [redacted] NHS Foundation Trust Amendment 4

JN

Dear Mia,

RE: IRAS 212897 Confirmation of Capacity and Capability for [redacted] NHS Foundation Trust Amendment 4

Full Study Title: Impact of metastereotypes on self-disclosure of mental health status

This email confirms that [redacted] NHS Foundation Trust has the capacity and capability to deliver the above referenced substantial amendment.

If you wish to discuss further, please do not hesitate to contact me.

Thank you,

Kind Regards,

Nigel Johnson

Nigel Johnson| Research Governance Support Officer|Non Clinical Staff Governor|[redacted] Hospitals NHS Foundation Trust/[redacted] NHS Foundation Trust/[redacted] Care Services,[redacted] Clinical Commissioning Group

SHOVELTON, Claire ([redacted] MENTAL HEALTH P... 15 January 2018 16:38

To: Mia Foxhall

Acknowledgement of substantial amendment 04 - 997AWP

SC

Dear Mia,

Title of study: **Does meta-stereotype activation impact rejection-expectation when considering self-disclosure of mental health status?**

IRAS ref: **212897**

Amendment no: **Substantial amendment 4**

This amendment has been reviewed at [redacted] MENTAL HEALTH PARTNERSHIP NHS TRUST and can be implemented once all other appropriate approvals (e.g. HRA, REC, MHRA etc.) are in place. **Please ensure you forward us copies of any other approvals as they become available, if you have not done so already.**

Please contact us using the details below if you require any further information.

Regards,
Claire

Dr Claire Shovelton (PhD)
Senior Research & Development Officer

Nathalia Gjersoe 1 December 2017 09:32

To: Mia Foxhall

Ethics 16-231 Amendment approved

NG

Dear Mia,

Thank you for letting us know about this amendment. I am happy to confirm that you have received full ethical approval, via Chair's Action. Your file will be updated to include these changes.

Best of luck with your research,
Dr. Nathalia Gjersoe
Chair, Psychology Ethics Committee

Appendix C8: Measures used in Study 2

Measure	Details
Clinical Outcomes in Routine Evaluation – Outcome Measure (CORE-OM; Evans et al., 2002)	The CORE-OM is a 34-item Likert-scale based measure of wellbeing, symptoms, function and risk. The mean is calculated and multiplied by 10; clinical cut-off is generally agreed as 10 (Barkham, Mellor-Clark, Connell, & Cahill, 2006). It has good psychometric properties (α = .77-.94; test-retest = .67 - .91), with strong discrimination between clinical and non-clinical samples and sensitivity to change (Evans et al., 2002).
Multicomponent model of in-group identification (Leach et al., 2008)	In-group identification was quantified using the Centrality subscale of the multicomponent model of in-group identification. Respondents indicate how true three statements are on a five-point Likert scale; higher scores indicate stronger in-group centrality. This subscale has an internal reliability of α = .80-.88 (Leach, Mosquera, Vliek, & Hirt, 2010). This measure was chosen as it is hypothesised to mediate sensitivity to in-group threats, and has been used in a similar manner previously (e.g. Owuamalam & Zagefka, 2011; Quinn et al., 2014).
Meta-stereotype elicitation	Measured using the tool developed in Study 1. The score is calculated by averaging to total score. The tool had good internal reliability in this study (α = .91)
Rejection-Expectation measure (Blodorn, Major, Hunger, & Miller, 2016)	An adapted version of the Rejection-Expectation measure (Blodorn, Major, Hunger, & Miller, 2016) comprises eight items about expectations of acceptance and rejection, answered on a 7-point Likert scale. The mean is calculated and higher scores indicate higher rejection expectation. The scale has internal reliability of α = .87 (Blodorn et al., 2016).
State Self-Esteem Scale (Heatherton & Polivy, 1991)	The scale comprises 20 items measuring state self-esteem, answered on a 5-point Likert scale. Respondents answer the questionnaire based on how they feel in that moment and higher scores indicate greater self-esteem. The scale consists of three subscales (social, performance, appearance) and total mean scores range from 69 – 77 (Heatherton & Polivy, 1991). The scale has an internal reliability of α = .92.
Comfort with disclosure (Rusch et al., 2011)	A single-item 7-point Likert scale was used to measure comfort with disclosure. High scores indicate greater comfort. The question had previously been employed by Rusch et al (2011) and was adapted for the purposes of this study.

Appendix C9: Vignettes for Phase 2.

Negative condition:

Nigel is 67 and is a retired builder. In his spare time, Nigel likes to play golf and go to the pub. Nigel doesn't know if any of his friends have had a mental health problem. He's not sure how he would respond, but thinks being with somebody with a mental health problem would make him uncomfortable. He doesn't know about a lot of mental health diagnoses, except for depression, which is "about being sad".

Nigel has seen some mention of mental health in the news but thinks it's talked about too much. He would prefer to support a cancer charity, as they do more important work.

Nigel thinks that you shouldn't share how you feel and supports a "stiff upper lip". He prefers to deal with stress by spending time alone. Nigel always asked his children to speak to their mother when they were upset as emotional conversations make him uncomfortable.

Positive Condition:

Debbie is 29 and works as a care assistant. In her spare time, Debbie enjoys reading and socialising. Debbie has several friends who have been diagnosed with mental health problems, and she thinks it's important to "be there" for her friends. She knows a lot about depression and anxiety, and has helped volunteer for a mental health peer support group in the past.

Debbie is glad that mental health is being talked about in the media more, and hopes it will open up conversation. She supports one of the main charities as she thinks that many of the peer support services are valuable.

Debbie thinks it is important to talk about how she feels, and tries to talk to others when she is feeling stressed. Debbie has also tried out some relaxation and mindfulness tasks she read about online

Why are we doing this research?

Some research suggests that being able to tell others about your mental health diagnosis can be good for your wellbeing, but it can be quite difficult for some people to do. One way of helping others in the future is to understand why this might be.

One thing that might make it more difficult is the way we think others' think about us, but this will be the first study to research this!

What's involved?

You will be asked to think about and discuss a person you know who you would like to tell your diagnosis to and how telling them would make you feel. Following this, you will be asked to answer some questionnaires that will help show how this has made you feel. You will be asked to do this for either a person who thinks about mental health positively or a person who thinks about mental health negatively.

You will also be asked some simple questions about you (e.g. age, gender, diagnosis) and complete a wellbeing questionnaire. At the end, you can do a mindfulness exercise if you like. Once this is finished, you will be given further information about the study and you can ask any further questions you might have.

How is information kept confidential?

Your name will be removed from your results, so you cannot be identified. You will be given a number, which only people involved in the study will know. Your consent form will be kept in a separate, locked container so they can't be linked.

All information collected about you will be kept confidential and conform to relevant requirements. This means all paper-based information will be locked away and all electronic information will be password protected, with access restricted to people involved in the study.

Personal identifiable data will be kept until the study ends, in case you want to withdraw your results. Anonymised data will be kept and securely destroyed after 5 years, consistent with Good Practice Guidelines for the conduct of research in the NHS. The Research Governance Sponsor of this study, the University of Bath, may monitor or audit this study to ensure that it is being conducted properly but your identity will not be revealed.

There is one exception when I can't guarantee confidentiality... as an NHS employee it's my duty to inform public services (e.g. your GP, Care Coordinator (if applicable), Social Services, the police) if you tell me anything that indicates that you or someone else is at risk, or there has been criminal activity or professional malpractice. I will try to let you know if I think I need to do this.

what others think

How does a mental health diagnosis affect how others see you?

I'm Mia, a trainee clinical psychologist at the University of Bath. **I am inviting you to take part in a piece of research** to help us understand what affects how comfortable someone feels with telling others about their mental health diagnosis.

However, before you decide, **it's important for you to understand why the study is being done and what it'll involve.** Please take time to read the following information carefully and discuss it with others if you wish.

Participant Information Sheet (Phase 2)
V3.2 07/11/2017
IRAS ID: 212897

Why am I being invited?

People with all kinds of mental health diagnoses can find it difficult to tell others about their diagnosis. As a person with a mental health diagnosis, your thoughts and feelings about this are important to help us understand what makes this easier.

You are being invited because you have expressed interest in participating, or have been identified by someone involved in your care as a person with a mental health diagnosis. However, if you are currently very unwell you may not be able to take part – you can discuss this with me if this is the case.

When and where?

If you agree to take part it will involve meeting with me for between 30-40 minutes either at: the University of Bath, a clinic room at the service that provides your care, or your home. The exact date, time and location will depend on availability.

Will I receive any payment?

Yes, you will receive a £5 gift voucher as a 'thank you' after taking part. If travelling to the university, we may be able to offer travel expenses.

What are the possible benefits of taking part?

By taking part, you could help to contribute to what we know about telling others about your mental health diagnosis. It might also help other research to take place in the area. This could be really beneficial in the future! A brief mindfulness exercise will be used at the end of the project. You may find this a helpful exercise to learn.

You can find out about study results if you want. To do this, I will keep your name and email address on a password-protected device. Results should be available between May-September 2018.

Are there possible disadvantages and risks of taking part?

There shouldn't be many disadvantages. However, you might find it difficult to imagine telling people about your diagnosis. If this happens you can stop at any point or choose not to answer a question. You will be also provided with contact information for organisations that may be able to provide support at the end if you do feel distressed.

What will happen if I don't want to carry on with the study?

A decision to take part, to withdraw at any time, or not to take part will not affect any treatment you're currently receiving or will receive in the future. If you decide to take part you are still free to withdraw at any time without giving a reason. You can also request any data already collected to be withdrawn from my write-up.

What if there is a problem?

It is hoped you feel satisfied and safe throughout the project. However, if you have any concerns or wish to complain about any aspect of this project, you should let me know and I will do my best to help. If this is unhelpful, you could contact the project supervisors, Lorna Hogg (l.i.hogg@bath.ac.uk) or Dr Laura Bocci (laura.bocci@nhs.net). If you remain unhappy and wish to complain, you can do this by contacting, the University of Bath Secretary Mark Humphriss on 01225 286212 or universitysec@bath.ac.uk. The University of Bath, as Sponsor of the study, has indemnity (insurance) arrangements in place. Every care will be taken to ensure your wellbeing during the course of this project.

Thank you for taking the time to read this leaflet. **I am happy to go through this booklet with you** and answer any questions. Please then **take time to decide whether or not you wish to take part**.

If you have decided you would like to take part or if you want to get in touch for any other reason, please email my work address: mia-research@bath.ac.uk or, if you don't mind, I can contact you by phone to arrange our meeting!

My meeting with Mia is on ___ / ___ / ___ (date) at _____ (place) at _____ (time)

What do you think other people think about you?

Consent Form

Name of Project Lead: Mia Foxhall

Please initial box

1. I confirm that I have read the information sheet for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily. ☐
2. I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason, without my medical care or legal rights being affected. ☐
3. I understand that data collected during the study, may be looked at by individuals from University of Bath and from the NHS Trust, where it is relevant to my taking part in this project. I give permission for these individuals to have access to this. ☐
4. I agree that my GP may be contacted in case of risk to self or others ☐
5. I agree that any data collected may be published in anonymous form in academic books or journals and/or conference papers. ☐
6. I agree to take part in the above study. ☐

Name of Participant	Date	Signature
Person taking consent	Date	Signature

1 copy to be given to participant, 1 copy to be kept by researcher, and 1 copy to be put in medical notes

IRAS ID: 212897

March 2017
V1.3

Mental health stereotypes

Below are 10 statements about how you think this person would stereotype you. For each one, circle the number which most represents how strongly you think this person holds these views. As a guide, 1 = absolutely not, 5 = neutral, and 9 = absolutely (but you can mark any number in between).

1) To what extent do you think this person expects you to be **dangerous**, based on your mental health diagnosis?										
Absolutely not	1	2	3	4	5	6	7	8	9	Absolutely

2) To what extent do you think this person expects you to be **using your mental health diagnosis as an excuse**?										
Absolutely not	1	2	3	4	5	6	7	8	9	Absolutely

3) To what extent do you think this person expects you to be **crazy**, based on your mental health diagnosis?										
Absolutely not	1	2	3	4	5	6	7	8	9	Absolutely

4) To what extent do you think this person expects you to be **weak**, based on your mental health diagnosis?										
Absolutely not	1	2	3	4	5	6	7	8	9	Absolutely

5) To what extent do you think this person expects you to **malingering (i.e. trying to escape duties or work)**, based on your mental health diagnosis?										
Absolutely not	1	2	3	4	5	6	7	8	9	Absolutely

6) To what extent do you think this person expects you to be **strange**, based on your mental health diagnosis?										
Absolutely not	1	2	3	4	5	6	7	8	9	Absolutely

7) To what extent do you think this person expects you to be **unable to function normally (i.e. go to school/work etc.),** based on your mental health diagnosis?										
Absolutely not	1	2	3	4	5	6	7	8	9	Absolutely

8) To what extent do you think this person expects you to be **unpredictable**, based on your mental health diagnosis?										
Absolutely not	1	2	3	4	5	6	7	8	9	Absolutely

9) To what extent do you think this person expects you are **over-reacting**, based on your mental health diagnosis?										
Absolutely not	1	2	3	4	5	6	7	8	9	Absolutely

10) To what extent do you think this person expects you to be **attention-seeking**, based on your mental health diagnosis?										
Absolutely not	1	2	3	4	5	6	7	8	9	Absolutely

Comfort with disclosure

Read the statement below and circle the number which best represents how feel right now. As a guide, 1 = very uncomfortable, 4 = neutral, and 7 = very comfortable (but you can mark any number in between).

In general, how comfortable would you feel talking to this person about your mental health, for example, telling them you have a mental health diagnosis and how it affects you?								
Very Uncomfortable	1	2	3	4	5	6	7	Very Comfortable

From Rusch N, Evans-Lacko S, Henderson C, Flach C, Thornicroft G (2011) Knowledge and attitudes as predictors of intentions to seek help and disclose a mental illness. *Psychiatric Serv* 62:675–678

IRAS no.: 212897

Comfort with Disclosure
June 2017 V1.0

How does a mental health diagnosis affect how others see you?

Key terms:
Meta-stereotype: *a stereotype that you believe people hold about you based on your membership to a particular group (e.g. the way a female thinks a male might stereotype her based on being female)*
Self-esteem: *confidence in your own worth or ability*
Stigma: *A 'mark of disgrace' that sets one apart, or an attribute that is viewed negatively by society*

Thank you for taking the time to complete this project. Your contribution is greatly appreciated. You have taken part in a project which will help us understand whether thinking about someone who you would like to tell a mental health diagnosis to, makes us think about stereotypes they might hold about you. These are called 'meta-stereotypes'. We also measured your self-esteem and how much you expected to be rejected. The study will help us understand if these are also linked.

You were asked to think about telling someone you know about your mental health diagnosis. You were split into two groups. One group was asked to think about someone with positive attitudes towards mental health, the other group thought of someone with negative attitudes. We did this to help us know if this is different when thinking about telling a person with either positive or negative attitude towards mental health.

Based on previous research, we know that meta-stereotypes are usually negative and are activated when we feel evaluated. Therefore, we predict that the number of meta-stereotype activated will have increased for people who considered telling a person with negative attitudes. We predict that this will have reduced your self-esteem and increased the amount you expected to be rejected.

We hope that this research will help create interventions that make telling others about a mental health diagnosis easier, for instance in learning how to manage and/or change meta-stereotypes. This may help improve the well being of people with a mental health diagnosis, but we also hope that this may help reduce stigma in the long run.

It is important to remember that stereotypes are a natural shortcut people use to categorise the social world they exist in. However, these are not always negative and not always true. For example, many stereotypes are based on averages and do not represent everyone in the group. The stereotypes you were asked about may not be true, may not be perceived negatively and may not even exist. Importantly, any stereotypes that do exist have the power to be changed.

It is hoped that you leave this study feeling satisfied and glad you took part. However, if this is not the case, you should contact me and I will do my best to address your concerns. If the stereotypes you activated have upset or distressed you in any way there is some support available to you. If you feel distressed at all after completing these questionnaires, you may wish to seek support from your care coordinator within your local mental health team or a national helpline if you would prefer to remain anonymous such as **Samaritans** (08457 90 90 90)

Please note, all of your responses are anonymous and will be kept with the strictest confidence. If you have any further queries, would like to know the outcome of the study, or would like to withdraw your data, please contact me at any point on: m.foxhall@bath.ac.uk

Thank you for your time. I am very grateful and hope you have gained something from taking part